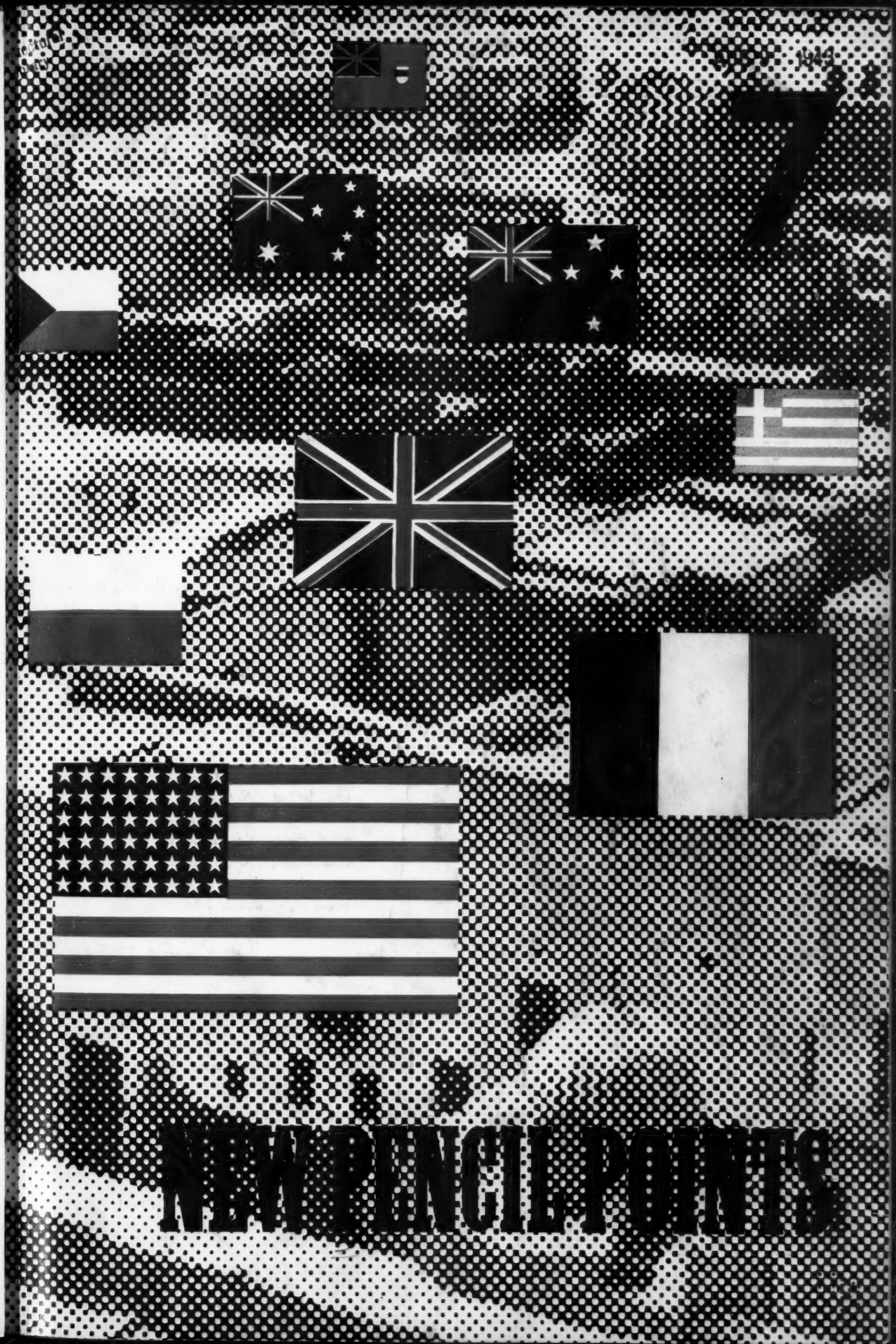
1943
NEW PENCIL POINTS

THE ALL-OUT WAR PRODUCTION OF TODAY—

MEANS BETTER STORE FRONTS OF TOMORROW

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RESIDENTIAL WINDOW

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Wash

New Pencil Points, July, 1943

7

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Herbert Matter, the distinguished photographer and artist, was engaged by Messrs. Kocher and Dearstyne to select and compose the special pictorial material used in the presentation of THE ARCHITECTURAL CENTER. Cover design, layout, and typography by Bernard Rudofsky.

Next Month:

The Progressive Planning Studies carried on by the National Resources Planning Board in collaboration with the cities of Tacoma, Washington; Salt Lake City, Utah; and Corpus Christi, Texas, will be described and illustrated for the first time, high-lighting a short and accurate method of evaluating a city's problems and preparing a flexible, basic scheme for its future development. Also featured in the August issue will be an authoritative article on modern concrete design, by Paul Weidlinger, an architect of broad experience who has made a special study of the possibilities of concrete as a continuous material.

KENNETH REID, Editor; FRANK G. LOPEZ, Managing Editor; DON GRAF, Technical Editor; ALFRED E. GALL, BERNARD RUDOFSKY, Associate Editors; MIRIAM WHITE, HELEN WILLS, Editorial Assistants; PHILIP H. HUBBARD, Publishing Director; JOHN G. BELCHER, Advertising Manager; JOHN ZELLNER, Circulation Manager.

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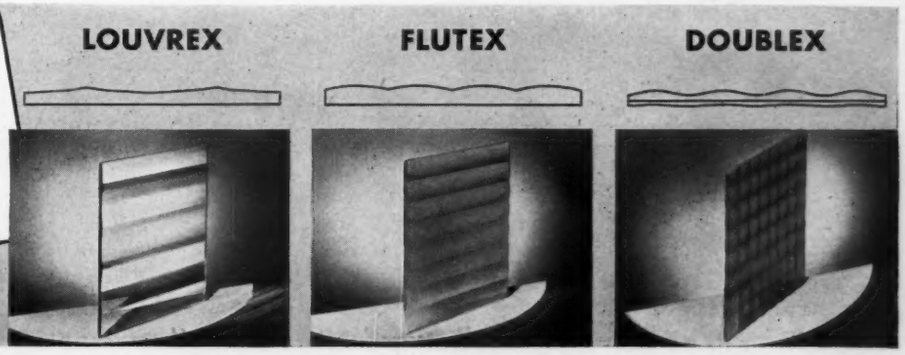


VIEWS

Opinions from readers

Remarks from the editors

Data wanted

Changes of address

We, as Professional Men—

Your "Letters from Readers" column is one glaring example of just what is wrong with the architectural profession.

The all-important problem of some definite professional policy, of unity among ourselves as truly a body of rational individuals, appears to be secondary to juvenile bickerings, squabbles and cat and dog fights.

We snap and snarl at each other, have absolutely no respect for a fellow architect's viewpoint, brand him ignorant because of his different school of thought and in general show as much unity of purpose as the Japs and our Marines in the South Pacific.

Now architects like P. D. Bentley and C. Clark introduce a new bone of contention which should be all-decisive towards the welfare of our profession, namely—"Nationalism," or whether the intellect of a fellow architect with a foreign-sounding name can be compared with a good old American attachment.

With this display of ignorant prejudice in our own ranks we, as professional men, expect to captivate the respect of our client —the general public.

I wonder where the dental, legal or medical professions would be today had these professional bodies scrapped all research experiments and progressive thought wherever the author involved possessed a foreign-sounding name.

GEORGE NAROVEC, Architect
Edmonton, Canada

The Worst Disease Rampant

Let me take this occasion to tell you about something quite disturbing I find in a couple of the letters on page 8 of the June issue, a matter which may seem irrelevant to the profession as such, but which is quite serious in its implications. One letter ends with the paragraph:

> "The foregoing is all in good humor and, let me add, speaking of Early American, I hope a few more articles and criticisms appear in your magazine by men with good old American names!"

This is signed by Percy D. Bentley, Architect, Eugene, Ore. Another letter contains the sentence:

> "Can't we progress without some "Ovsky" or "Ferriner" to blast what few American ways are here to work with?"

This is signed by Cameron Clark of New York. Doesn't this look as though the worst disease rampant in the world today is beginning to affect some parts of the architectural profession? Without exaggeration, I must say that it is alarming to think that men of intelligence and education should even be susceptible to such unthinkingly narrow sentiments. I do not know Mr. Bentley, but I know Cameron Clark and respect him highly as one of the leaders of the profession in our home town. As a matter of fact, right now he is crowning his career in doing a great public service since he has become, by appointment of Borough President Nathan, the consulting architect to the Borough of Manhattan, succeeding Harvey Stevenson who contributed so notably, in that capacity, to the design of East River Drive. For men of this caliber to express themselves so thoughtlessly is really a matter of concern to those of us who care about preserving all of the things we are fighting for.

Now, let it be clearly understood that, in so far as an anti-foreign point of view is inferred, as it well might be, in some of the unfavorable letters in your May issue, there is a real basis for discussion, if one looks upon it as *an honest difference of opinion*. For example, many of us who are alumni of the Harvard Architectural School have sincerely criticized Dean Hudnut for putting Mr. Gropius and his associates in full charge of teaching there when there is reasonable doubt as to whether the Bauhaus tradition, with which these men are permeated, can contribute more than a relatively minor current to the main stream of progressive American architecture. To raise the issue of the foreignness of the Bauhaus school of thought as a whole, whether it is championed by a Gropius or a Hitchcock, can be regarded as a legitimate effort to preserve our own traditions and direct them towards the best line of progress. But to make cracks on the subject of *names,* as Messrs. Bentley and Clark have done, seems unworthy of architects of the standing of those quoted and calls attention to one aspect of the war on the home front to which many of us are naturally sensitive at the present time.

During the last world war I recall that many American families which, like my own, had names which indicated obviously German ancestry, anglicized them right and left in an effort to avoid the prejudices of those days. Others felt then, as most of us do now, that such practices have about as much sense as calling sauerkraut "liberty cabbage". But, doubtless, many families of German or Italian ancestry are resorting to the same childish dodge today simply because they are up against the difficulty of being turned down for jobs, on account of their names alone, by employers who are infected with the disease of intolerance or who, like Messrs. Bentley and Clark, may be unconscious "carriers". Such a tendency,

(Continued on page 10)

Remember That Till You Die

Your June issue carried a letter by Cameron Clark which should bring a feeling of shame to every decent American.

This letter takes issue with Pencil Points for its article on the Gropius-Wachsmann "Packaged Building," complains that our architectural schools are "piled full of Germans" and ends up quite logically by a flank attack on every "ferriner and ovsky" who, it seems, are going to "blast what few American ways are here . . . . "

I wish we could shrug off this mean-spirited little letter as an isolated example of intolerance and untypical of our American traditions hospitality. The truth is that Clark's point of view is alarmingly wide-spread and therefore dangerous.

In the name of common sense, if nothing else, what is the substance of his position? If a handful of foreign architects (and, apparently, those whose names happen to be distasteful to Clark) is actually going to be able to destroy American architecture then either of two facts follows: First, that these "ferriners" have some amazingly potent and superior ideas, in which case we should welcome them with open arms; or second, that the profession is too sick to stand up to the "invasion" in which case a transfusion of new blood would do the patient a lot of good.

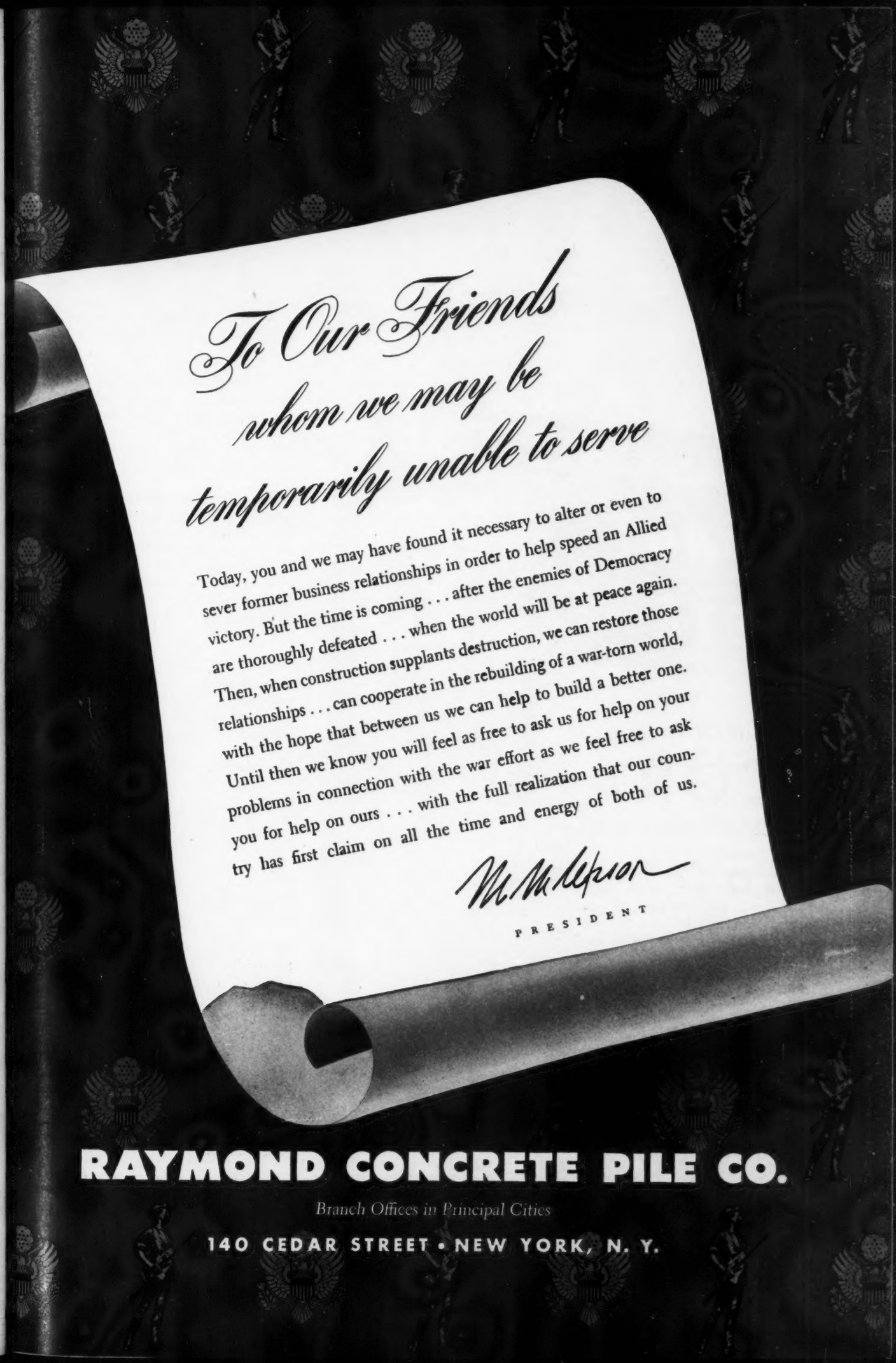
The real question of course, is more serious. Are we as Americans ready to step out of our provincial shells and take our proper place among the nations and peoples of the world? Are we as architects prepared to accept the implications of this war against fascism and the herrenvolk?

If space permitted, I would tell of how our British colleagues faced this problem with humanity and grace. As Edward Carter, Librarian of the Royal Institute of British Architects told us when he spoke at the Architectural League some months ago, the R.I.B.A. stretched a ready helping hand to their foreign colleagues who fled the Nazi brute.

Perhaps the most appropriate comment on this issue is the following quotation from Stephen Vincent Benet's book "Western Star," a poem about the founding of our country:

"Remember that till you die. Remember that,
Remember the name of the outcast and the stranger
Remember when you say
'I will have none of this exile and this stranger
For his face is not like my face and his speech is strange'
You have denied America with that word
Though your fathers were the first to settle the land."

Simon Breines, Architect
(Pomerand & Breines, N. Y.)


To Our Friends
whom we may be
temporarily unable to serve
Today, you and we may have found it necessary to alter or even to sever former business relationships in order to help speed an Allied victory. But the time is coming . . . after the enemies of Democracy are thoroughly defeated . . . when the world will be at peace again. Then, when construction supplants destruction, we can restore those relationships . . . can cooperate in the rebuilding of a war-torn world, with the hope that between us we can help to build a better one. Until then we know you will feel as free to ask us for help on your problems in connection with the war effort as we feel free to ask you for help on ours . . . with the full realization that our country has first claim on all the time and energy of both of us.
PRESIDENT
RAYMOND CONCRETE PILE CO.
Branch Offices in Principal Cities
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VIEWS

(Continued from page 8)

however, is but one of the many evidences of the way in which the subversive influences now at work can intimidate unthinking citizens into acts of inherent weakness and submission. And I am sure that the reading of passages in letters, such as those I quoted above, may be one of the ways of spreading the disease unless, as one can only hope, *all* of your readers are wise enough to discount them as aberrations.

Please do not think that I am criticising you for running the letters, far from it. If you did not, one might never realize how easily such sentiments are spread. If you had this in mind in publishing the letters, I think you have done a service in calling to your readers' attention the extent to which, and the ease with which, the flames of narrow nationalism are fanned.

I do not know just what can be done about it, and I would be interested to learn what the reactions of other readers have been.

ROBERT C. WEINBERG, Architect
New York

In Rebuttal——

Your use of Walter Gordon's "Cities While You Wait," in your April number, was a surprise. Mr. Gordon is a facile writer, but not accurate in this case.

You are familiar with the fairly high standard of design in our region, so you can reasonably doubt our "indifference and complacency." But those less familiar with the northwest must conclude from the story that we lack gumption and concern in our war work.

We do not mind being accused of lacking in perception so much as we resent being called "indifferent." Our staffs may have been "haggard" but never "indifferent and careless." Few hours were wasted on "elaborate titles;" these were done by the printing press and the blueprinter, mechanically.

It is untrue "that hardly more than a few Portland architects are seriously concerned with the shortcomings of local housing efforts." Mr. Gordon knows but one office, and that office is really concerned, as are all participating organizations.

The article ignored the work of the fine agency organizations whose cooperation we have enjoyed. The local housing office and both regional offices of the F.P.H.A., in San Francisco and Seattle, have given us every possible consideration commensurate with the problem at hand. Their personnel has worked with ours on a twenty-four hour schedule.

Our problem on the coast has been a gigantic one in housing—for just "minimum shelter." In fact, that is their designation. They were meant to be precisely minimum shelter—even, as Mr. Gordon says "upon what had formerly been a fine, wooded, and orchard studded landscape."

The story was smartly illustrated with bad angle photos. We are not seeking praise, but we do believe there is sufficient reason to recognize merit instead of emphasizing unimportant temporary situations of deep rutted roads and laundry hung porches.

We admit that Vancouver is far from a Shangri-La, and Mr. Gordon's regret of a lack of climax and his regret of supermonotony are reasonable but not too important, for any pattern of 10,000 uniform units might be excitingly done on paper, but the result must still be boring in reality. This unhappy situation can hardly be laid to any lone door. A long range planning program would, under the emergency, have necessitated more than a super staff of clairvoyants to have foretold our present needs.

Mr. Gordon is correct in saying slum clearance projects are out here. They are ruled out elsewhere too. This is temporary housing. It has been an overwhelming problem, but we believe that its objective has

(Continued on page 88)

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NEWS

Design and constructio
Developments afield
Building regulations
Related professions
Products progress

WPB is to get a plan soon for the erection of civilian production plants to insure the prompt transfer of manpower from war to peace industry. This plan is being proposed by the Industrial Advisory Board, Committee for Economic Development, according to David C. Prince, chairman. A triple-A priority will be requested for building materials for erection of these plants, such materials being requisitioned per a schedule fitting the gradual tapering off of war industry. The aim is to insure a gap of little more than a few weeks between the two types of occupation.

A WOOD FURNITURE ORDER by WPB takes effect July 1; it calls for a cut of approximately two-thirds in the number of existing patterns. However, total quantity of furniture is limited merely by availability of materials and manpower.

Per WPB: a 2% drop from March was April's record in construction volume, $746 million being the actual figure, which is about half the peak volume reached last August. A 5% decrease is expected for May's record when completed.

Military housing dropped. There was little change in civilian war housing; privately financed housing was up slightly while government financed housing dropped. Over the year's time the volume of the latter is expected to exceed the former.

There was a sharp drop in ordnance plant construction. Aircraft plant construction fell and raw material plant construction dropped 1%.

Government-owned CORK will be released shortly for sale to industry because the stocks in this country are at a high level and because there are potential supplies in Portugal, Spain, and North Africa. This new policy of the WPB's Cork, Asbestos and Fibrous Glass Division will affect the building industry in a welcome way.

WPB has estimated lumber need for 1943 as 11,000,000,000 board feet, not including lumber for maintenance and repairs, machinery and equipment, or boxing and crating war and civilian supplies.

Residential construction—7 billion in 1946? So forecasts the postwar market analysis of the Department of Commerce (1946 being chosen as probably the first normal postwar year). The current estimate going the rounds is 1 million urban and ½ million suburban and farm homes needed per year for ten years after the war.

Timber has "come into its own" again. Three all-time world records for timber construction were set in 1943: the largest amount of wood ever used in a single building went into a cargo-plane assembly plant built by the Austin Company; the largest clear-span timber arches ever erected roof the Navy's new timber blimp hangar (237 feet span, 153 feet high, 1,000 feet long); speed of construction record was broken when the Navy completed in seven months its training station (not entirely of wood) in New York State, using 41,000,000 board feet of lumber in its 400 buildings.

The metal shortages caused by the war accelerated the use of timber as structural material and the timber connector, which spreads the load on a timber joint over practically the entire cross-section, made possible its wide use.

A movement is about to start, they say, in the Pentagon Building, Washington, to collect portal-to-portal pay in this huge edifice, as extra time spent at each end of the day often mounts up to fifteen minutes. Is this a reflection on the architects' planning?

According to Major-General Fleming, FWA Administrator, of the 15 million workers estimated for release from war work at the war's end, 2½ million can be used in construction, public and private. $15 billion annually will be needed to provide this employment.

A HOME DEHYDRATOR is probably going to be available for the American housewife shortly; 100,000 of them in fact, and they will sell for about $20 to $30 each. The immediate value of this method of preserving over that of canning is that dehydrated foods do not require sugar, jars, seals, pressure cookers, and similar scarce materials. The clog in the works on producing this item has been getting releases on the required materials—steel, copper, and copper-base alloys.

Five 200-watt electric bulbs furnish the heat, aided by an electric fan to circulate the air over the trays of blanched food, which finally are reduced to one-tenth their prior size and can be stored in closed but not necessarily airtight containers.

POSTWAR HOUSES — ANOTHER ESTIMATE. $3,000 to $6,000 is the probable unit cost of 70 percent of the postwar houses according to the estimate of Irving W. Clark, manager of Westinghouse's Home Building Department. One million housing units per year for 10 years or longer is his guess.

The JUSTRITE DRAWING INK CONTEST winners of $50 war bonds are: Constance Turner, Minneapolis, first prize in the Professional Artist Class; and Deborah Granaat, White Plains, N. Y., first prize in the Student Classification. The contest is conducted by the Louis Melind Company of Chicago.

A jury of Harvey Wiley CORBETT, Ely Jacques KAHN, Alexander ARCHIPENKO, and others in the art fields, made the selections for prizes awarded to entrants in the 19th annual National Soap Sculpture Competition. First prize winners were: Junior Class, Ruthy Brown, La Mesa, Calif.; Senior Class, Gioconda Oresti, Pittsburgh, Pa.; Advanced Amateur Class, Mable V. Mustonen, Detroit, Mich. Details of the 1944 contest will be announced shortly.

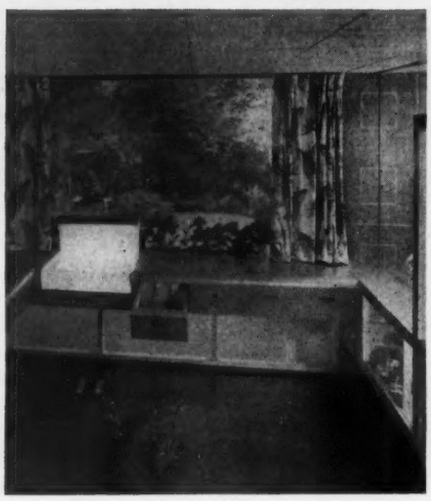
In spite of Russian war activities LENINGRAD'S ARCHITECTS take time for competitions as they did in normal periods. Recently held were: one for the decoration of city squares through which army units pass on their way to the front; another for a monument commemorating the lifting of the siege of Leningrad; and another for the rehabilitation of wrecked areas. The Leningrad Union of Architects which usually conducts these competitions is arranging for others to be held shortly.

A Legislative Palace to be constructed in Quito, Ecuador, is the subject of a COMPETITION open to architects and engineers resident in the Pan-American Republics. From the preliminary stage of the competition which closes October 1, 1943, five entrants will be chosen who will have the right to compete in the second or final stage lasting approximately four months. The author of the project selected will have preferential right to undertake the direction of the work. Five cash prizes, ranging from $750 to $3,500 are scheduled for award.

(Continued on page 14)

NEWS

The housewife of the postwar era will find her kitchen drudgery a thing of the past if modern designers have their way. Pictured at left and below is a new kitchen-dining room design conceived by H. Creston Doner, of Libbey-Owens-Ford Glass Co. The design experiments with new cooking methods and with new space arrangements for physical and social recreational activities within the cooking-dining areas—a belated recognition of living habits that have always existed. Here, bending and stooping are practically eliminated by hanging all cabinets and fixtures from the wall at proper working levels. Ample foot space beneath the cabinets permits the housewife to do most of her work while seated.



Architects should be pleased with the recent decision made by the New York City Board of Education authorizing eleven private architectural firms to design schools to be built after the war. Three contracts have already been awarded and 29 projects remain to be designed. These, too, will be given to private architects.

The architects of six postwar public housing projects were announced recently by the New York City Housing Authority as follows: *Lillian Wald Houses* by Frederick L. Ackerman and Lafayette A. Goldstone; *Morrisania Houses* by O'Connor and Delany, Aymar Embury II, and Matthew W. Del Gaudio; *Abraham Lincoln Houses* by Edwin M. Forbes, Louis Skidmore, for Skidmore, Owings and Merrill, and Vertner W. Tanby; *James Weldon Johnson Houses* by Robert J. Reiley, Harry M. Prince and Julian Whittlesey; *Marcy Houses* by Voorhees, Walker, Foley & Smith, F. P. Platt and Brother, and Adolph Goldberg; *Gowanus Houses* by Ely Jacques Kahn, Rosario Candela, and William T. McCarthy.

The City Planning Commission of New York adopted a ZONING AMENDMENT which opens the way for construction of a laboratory for Sylvania Electric Products, Inc. in Beechhurst, Queens. Proposed specifically for construction in residential areas of "administrative offices and industrial laboratory projects", safeguards are included for retaining the residential character of such areas. This amendment, which goes before the Board of Estimate and, if not rejected within thirty days, becomes a law, will affect the building trade materially and will attract new business to New York.

At the Colegio Libre de Estudios Superiores, Buenos Aires, the DEAN OF COLUMBIA UNIVERSITY, LEOPOLD ARNAUD will deliver a series of lectures during July and August under the auspices of the Division of Cultural Relations of the United States Department of State. The subjects will be *"The History of Architecture in the United States"* and *"Technical Aspects of Building in the United States."* Dean Arnaud will also lecture in Ecuador, Chile, Uruguay, Argentina, Peru.

As in 1941 and 1942, a WORK CAMP FOR STUDENTS IN ARCHITECTURE is being conducted at Black Mountain College, under A. Lawrence Kocher, Architect, assisted by Anatole Kopp, graduate of M.I.T., and by Charles Godfrey, builder and contractor of Black Mountain. Instruction includes construction work on buildings, field surveying, masonry, carpentry, cabinet work, building supervision, electric wiring, plumbing and heating installation, discussions on new materials, economical construction, and postwar planning. Fee including room, board, and tuition is $12.50 per week.

The recent passing of FRANCIS HENRY LENYGON brings to mind the quality of his position as a decorator, the example he set for all in his profession by his close bridging of the usually large gap between the viewpoint of the decorator and that of the architect. His ability to function in this exemplary manner was partially due to training in architecture, to scholarly knowledge, and to good taste. Noted is his work at Buckingham Palace, Windsor Castle, and the Governor's Palace at Williamsburg, Virginia.

The American Society of Architectural Historians has formed a Washington chapter. All architects and architectural historians who are interested should communicate with Alan Burnham, 1117 E. Capitol St., Washington 3, D. C.

An honorary degree of Doctor of Letters was conferred upon WILLIAM FREDERICK LAMB, New York architect, by Columbia University at its 189th annual commencement. Mr. Lamb, a member of the Federal Art Commission, has served on many architectural projects including the New York World's Fair, and the Empire State Building.

FROM ARCHITECT TO MAJOR: Arthur G. Odell, Jr., an architect of Charlotte, N. C., has recently received promotion to the title of Major in the Corps of Engineers, U. S. A. Previous to entry in the armed services he was associated with Harrison & Fouilhoux and with Raymond Loewy, and later he conducted his own practice in North Carolina.

A meeting of the Conference Committee on Urban Problems will be held at Washington, Sept. 29. Discussion will be on "State Urban Redevelopment Corporation Laws", "Proposed Federal Legislation", "The City's Postwar Responsibilities."

A state group, a postwar planning commission of Michigan, has recently formed a 9-point program which includes the taking of an inventory of all state buildings and the forming of a complete program for improvements and new construction.

A series of PLANNING CONFERENCES scheduled for the fall at Evergreen House, Baltimore, will be similar to those recently held there under the direction of Michael Rosenauer, A.I.A., F.R.I.B.A. The early sessions included discussions on airports, parkways, and the Government's part in urban planning.

The State Planning Board of California has been abolished and its functions have been absorbed by the State Reconstruction and Reemployment Commission. It is reported that this action was taken because the outgoing governor did not leave the filling of appointments to his successor.

The American Society of Agricultural Engineers held its 36th annual meeting at Purdue University. The convention considered engineering problems involved in meeting wartime demands for efficient production and conservation of the produce of American farms.

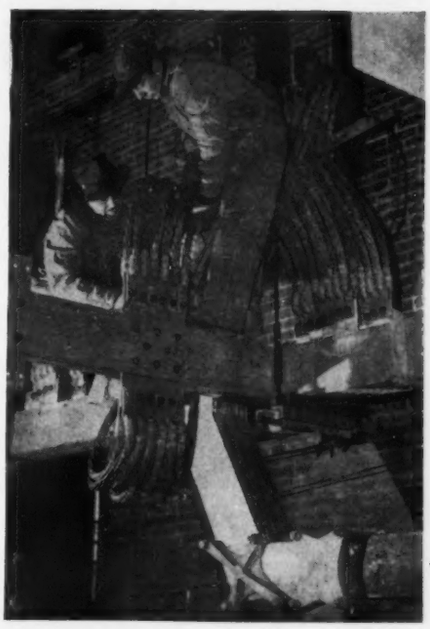
Projects which are being proposed by the Fine Arts Commission for beautifying Washington in the postwar era include a six-lane highway connecting Washington with cities to the north, a gigantic sports stadium, a 500-acre center of plant life in northeast Washington with a large administration building and modern greenhouses; also a subway underneath Union Station, additions to the Smithsonian Institution, the National Academy of Science, and the Public Health Service, and many other projects.

Chicago's furniture market in June showed only a dismal outlook for the duration; little likelihood of adequate supplies is in view. Whatever stocks were purchased were strictly on an allotment and allocation basis and most orders were taken on the understanding of four to six months delivery. However, Lawrence H. Whiting, president of the American Furniture Mart, held forth faith that in 1944 war requirements will have been cared for to such an extent that civilian production can again start on an upward curve.

The HELICOPTER as an "air flivver" was the subject of a prediction by Henry J. Kaiser and Igor L. Sikorsky at a meeting of the New York section of the Institute of Aeronautical Sciences, June 21st. Mr. Sikorsky predicted, as he has done previously, that hundreds of thousands, and perhaps a million, helicopters will be in the air within ten years after the war. Mr. Kaiser described the tremendous industrial and engineering activity which this progress in air transportation will entail.

"ARTISTS IN WOOD," an exhibition of wood carving, is being held at the Brooklyn Museum July 16 to September 6. The material, both utilitarian and esthetic, is drawn from the Museum's permanent collection of work from the earliest times to the present.

"Somewhere in Michigan" a new defense plant has been built for magnesium production. Electric current,



used in the manufacturing process, flows through huge bus bars of solid silver, this costly metal replacing the usual copper which is now urgently needed for shells and ordnance material. The silver was loaned to the Defense Plant Corp., owner of the plant, by the government. The operating firm is the Dow Magnesium Corp. Extensive use is also made of wood and plastics in the plant construction.

Another version of the prefabricated house, known as the "ACCORDION HOUSE," was exhibited recently at Akron, Ohio by the Goodyear Tire and Rubber Company. It can be folded in a few hours and shipped by truck or rail, bay windows and such folding inward for compact moving. Plywood plastics is the material, the exterior being covered with a thin metal skin (this skin may be replaced by plastic in the future) and a plastic insulation material as light as cotton is used. The present version is 26 by 15 by 8 feet high, weighing less than two tons.

ELIEL SAARINEN, Director of the School of Architecture at Cranbrook Academy of Art, Detroit, and author of "THE CITY", addressed a meeting of the Detroit Chapter of the A.I.A. and the Michigan Society of Architects at Cranbrook July 9th. He discussed his approach to city planning and indicated a procedure whereby the separate communities comprising the Detroit area might be examined in detail, keeping in mind their relation to the larger concept of city planning for the district.

Metropolitan Life Insurance Company's STUYVESANT TOWN plan and contract has finally been approved by the Board of Estimate of New York City. It looks as if, in our present stage of social development, private capital (this time $55 million) still holds the reins and we must suffer 24,000 persons to live subject to excessive population density, absence of schools or public meeting halls, privately-owned streets, and similar conditions.

Senator Wagner's bill for postwar planning calls for FEDERAL GRANTS to cities or metropolitan areas for the acquisition of land in deteriorated neighborhoods for redevelopment by private and public enterprise, would vest control in the National Housing Agency, proposes also to aid local bodies in the formulation of plans for postwar building. The proposed bill provides that loans for land purchase be secured by liens on land itself, that loans be repaid within 99-year periods, that land thus acquired may be sold as well as leased in whole or in part, that terms be long and that interest rates be low, as federal credit only can afford.

In contrast to this bill is Utah's Senator Thomas' proposal which permits only leasehold and retains land ownership, and secures federal loans by liens on rentals rather than on land.

A motion picture on the BASIC PRINCIPLES OF DRAFTSMANSHIP has been produced by the Jam Handy Organization, Detroit, Mich. Although arranged primarily to train draftsmen for product and machine design in industry, this film (16mm) is of value in the building and architectural field.

(Continued on page 16)

NEWS

Products Progress

GRIPTRED is a lightweight, non-slip, plastic material containing abrasive aggregate, and is used as a floor covering and as a protective coating for metals and woods. Application is by spray or trowel to steel, wood, concrete, and other surfaces. It is shipped as a viscous fluid in sealed metal containers, 1-, 5-, and 10-gallon sizes. Griptred dries sufficiently in 2½-3 hours to allow light traffic; for heavy traffic, there should be an 8-hour interval after application. The product, by Goodyear Tire & Rubber Co., is said to resist the deteriorating action of oil, grease, gasoline, salt, sulphur, soap, and to protect metal from corrosion and wood from moisture.

Designed to meet the requirements of industries whose print production has grown from small to the intermediate stage is the new Revolute 8Q Printer design-

ed by Paragon-Revolute Corp., 77 South Ave., Rochester 4, N. Y. The unit occupies small floor space, will expose blueprints, direct process prints, and sepia negatives up to 54″ wide. Speeds range from 6″ to 32 lineal feet per minute. The new printer incorporates revolving contact and uses a quartz high pressure mercury vapor lamp, drawing approximately 75 watts per lineal inch.

A new screw for wood, plastic, and combination assemblies has been introduced by Blake & Johnson Co., Waterville, Conn. The Twin-Fast screw presents

patented features in shank, thread, and point. The screw has two parellel threads which start at opposite sides of the shank, terminate in a single, centered point, with the standard number of threads per inch. Screws are cylindrical in contour, not tapered, and thus have increased thread area, providing tighter seating and greater holding power. It is claimed that because of this factor shorter screws and even fewer screws often can be used. They come in all standard sizes, in steel and brass, with round, flat, and oval heads.

A quick setting, permanent waterproofing material has been developed by Tamms Silica Co., 228 N. LaSalle St., Chicago. Known as Stop-It, the product may be used for repairing cracks in walls, floors. It is also suggested for repointing brick and other masonry surfaces. Stop-It is supplied in powder form, made ready for use simply by adding water.

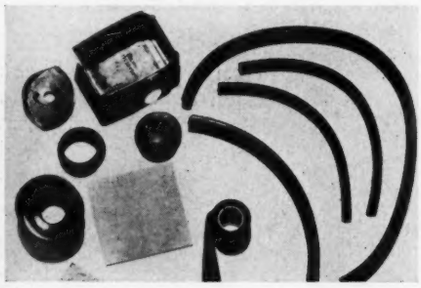
The MARSH SHOWER CABINET may be assembled at the point of use in four steps. The entire cabinet consists of but five major parts—two side panels (one

of which includes the plumbing panel), front assembly, back assembly, and concrete base receptor. It is complete to soap dish, curtain, shower rod, plumbing fixtures. Superstructure corners and top rails are of heavy wood construction, tied together with metal corner braces attached with wood screws. Waterproofing is accomplished by caulking all joints. Both sides of all panels are high-heat-bake plastic-finished Marlite. No metal of any kind is used except a few attachment lugs at the base, top corners, and on the shower spray assembly. While the shower cabinet is built to order for NHA-FPHA special use in critical housing areas, they are available for any war housing project when satisfactory priorities can be furnished. Marsh Wall Products, Inc., Dover, Ohio.

WHITEX, a new type white pencil tracing cloth, has been developed by Frederick Post Co., Box 803, Chicago, Ill. The cloth is moisture resistant on both sides. Pencil lines are said to leave a jet black image on its fine-tooth surface. This feature, plus the glass-like transparency of Whitex, is claimed to produce prints that have a uniform background and sharp white detail. Samples available.

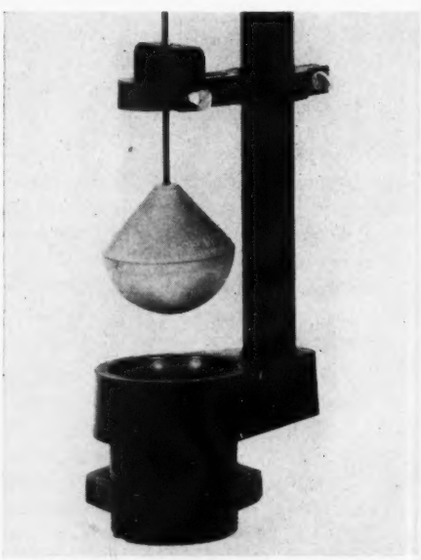
A new, easily applied, penetrating color and hardener for concrete floors, requiring no etching, has been developed by Wilbur & Williams Co., Boston, Mass. The use of this Dye-Crete color hardener eliminates the need of etching to neutralize the alkaline content of concrete. The hardener is available in six colors and clear, and coverage ranges between 250-400 square feet per gallon. Colors available include Spanish yellow, chestnut brown, tile red, club green, light gray, battleship gray.

A rubber-substitute that can be made in paint factories from vegetable oils and without the use of critical materials was announced recently as suitable for ce-



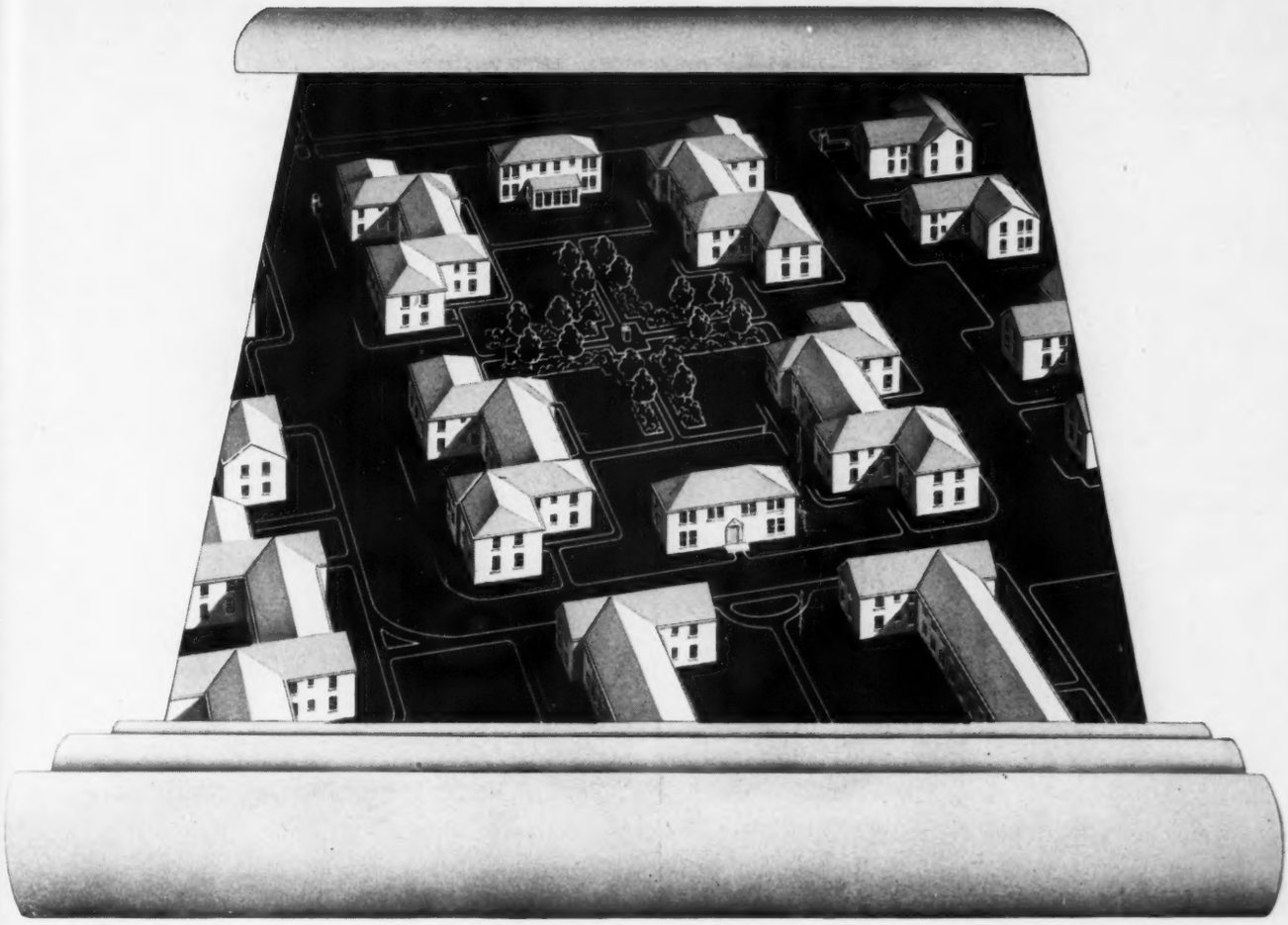
ments, erasers, floor mats, and other products. Known as Kem-Pol, it was developed by Sherwin-Williams Co., Cleveland, Ohio. Kem-Pol, available in four different types, is not a synthetic rubber, but rather a substitute, replacement, and extender for natural, synthetic, and reclaimed rubbers in those cases where lower tensile strength and elongation are permissible.

To eliminate the use of critical war materials and enable users to get delivery now, a flush valve for low tanks, made entirely of plastic except for the wire, screws, and rubber bulb, has been put on



the market by Good Mfg. Co. Inc., New York. Since the plastic seat cannot become corroded or pitted, it is said that this plastic flush valve has a long life.

(Continued on page 18)



Progress That Is As Practical As Steel Itself

No rapturous flight of fancy is essential to the concept of tomorrow's building designs. Progress will involve the application of improved methods, materials and practices to time-honored forms, while "inspired architecture" may well be a matter of dollars-and-cents value. The prospect is no less exciting for this. Stran-Steel engineered systems are practical, flexible, adaptable to varied requirements. They were applied successfully to housing projects of many types before the war, and are now meeting military building requirements for the armed forces. Stran-Steel is well qualified to serve the post-war building industry.

STRAN STEEL

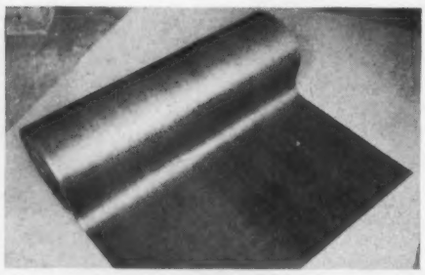
DIVISION OF GREAT LAKES STEEL CORPORATION
1130 PENOBSCOT BUILDING, DETROIT, MICHIGAN

UNIT OF NATIONAL STEEL CORPORATION

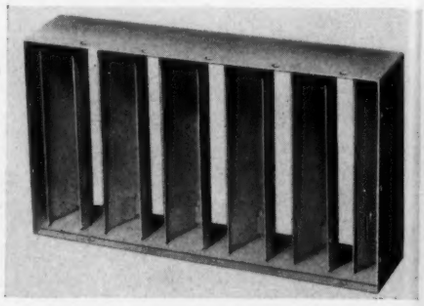
NEWS

(Continued from page 16)

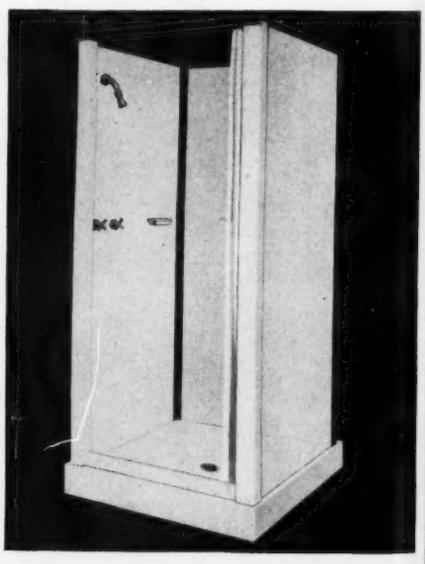
Although rubber matting is not now being manufactured, Bird & Son, Inc., East Walpole, Mass., has developed a supplementary floor covering. This product is called Rubberlike and is made of a composition material with deep corrugations said to give it an appearance similar to rubber matting. It may be used as a utility rubber or supplementary floor covering in office buildings, factories, and institutions of all types. Water does not make it slippery, it is claimed. Rubberlike matting lies flat and can be rolled up and relaid easily. Because of this, the product is suitable either as temporary or permanent protection for floors in shipping rooms, restaurants, factories, service areas, and as a covering for splintered wood floors, cement floors, and around machines and other spots where safe footing is required. It is available in three widths—27″, 36″, and 54″.



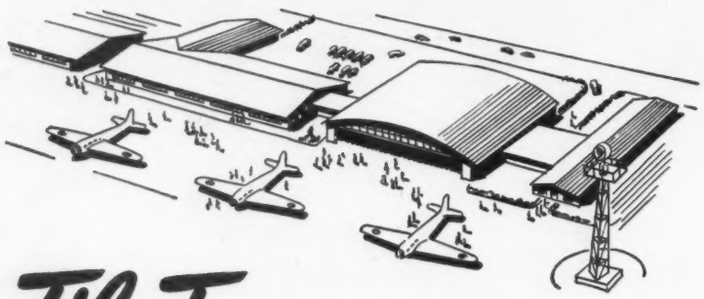
The Barber-Colman Volocitrol has been designed to noiselessly provide positive and adjustable control of air volume, pressure, and distribution across a supply outlet. The frame is made of 16 gauge steel 2⅛″ wide. The pivoted louvers are of 24 gauge steel. Friction pins on each louver allow it to be set by hand. Once set, the positions are maintained. A fireproofed felt edging strip to fit between the frame of the Volocitrol and the duct is furnished as standard. Bulletin F-1916 describes the new unit. Barber-Colman Co., Rockford, Ill.



A non-metallic CABINET SHOWER which contains less than one pound of metal is now being made by Henry Weis Mfg. Co. Inc., Elkhart, Ind. It is said to be leakproof, convenient, space- and time-saving, and simple to erect. Feature is the plastex receptor which is processed under 3 million pounds pressure. Walls are of ⅛″ hard pressed fibre board, finished inside and outside with white baked enamel. Joining members are fabricated from wood. Side walls are attached with screws. Inside and outside corner members are pre-assembled at the factory. Two sizes are available: 30x 30x75″ and 32x32x75″. Standard equipment includes soap dish, curtain rod integral with top frame, plastic hangers, duck curtain, cast drain with strainer integral with receptor floor, and two-valve combination concealed type unit with shower head.



They train for the Air... on



Tile-Tex Floors

They are setting a terrific training pace at Army and Navy Air Bases these days. That's why Administration Buildings, Classrooms, Dining Halls, Dispensaries, Locker Rooms and Recreational Areas are using Tile-Tex floors. Such areas demand a floor that will withstand severe usage and at the same time look attractive with only minimum maintenance.

Tile-Tex, made from long-wearing asphalt and asbestos, qualifies as such a flooring. It can be installed at or below grade level—replacements can be made without interfering with adjoining areas. Tile-Tex is still available with reasonable promptness in a wide range of colors, shapes and sizes —and at a reasonable low first cost.

We'd like to give you more specific information on the use of Tile-Tex in Military Air Bases. Write us for further data and the name of your nearest Tile-Tex contractor.

★ **The Tile-Tex Company**

101 Park Avenue, New York City • Chicago Heights, Illinois

MAKE THIS TEST — *Prove* BRIXMENT is BEST!

1

2

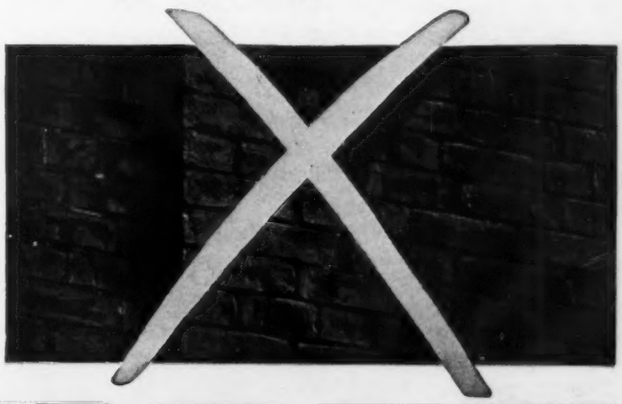
Above: A cylinder of Brixment mortar (left) and a cylinder of mortar made with 50-50 cement and lime mortar (right). Both specimens were made at the same time, and subjected to exactly the same treatment. After curing for 30 days, ¼" of water was put into the tray and the cylinders were alternately frozen and thawed 15 times. Note in photo 2 that Brixment mortar remains intact, whereas the other mortar has crumbled badly. This simple test can be made in any ice-manufacturing plant.

BRIXMENT *Makes More* DURABLE *Mortar!*

FOR permanent strength and beauty, mortar must be *durable*—must be able to withstand the alternate freezing and thawing to which it is subjected many times each winter.

Brixment mortar *is more durable.* This greater durability is due partly to the strength and soundness of Brixment mortar, and partly to the fact that Brixment is waterproofed during manufacture. This waterproofing helps prevent the mortar from becoming saturated—therefore protects it from the destructive action of freezing and thawing.

Walls built with Brixment mortar therefore *retain* their original strength and appearance. Even in parapet walls and chimneys, where exposure is particularly severe, Brixment mortar will almost never require re-pointing.



BRIXMENT

For Mortar and Stucco

Louisville Cement Company, Incorporated, Louisville, Kentucky. Cement Manufacturers for Over a Century.

REVIEWS

Books
Periodicals
Bibliographies
Manufacturer's literature

Books

Life Isn't Much Like That

Touted widely as "The Arrowsmith of the Architectural Profession", and accepted by a public which has quickly bought out the whole first edition, *The Fountainhead*,* a first and super-psychological novel by Ayn Rand, is having an effect that certainly will be of interest—and may be of importance—to architects. There is no assurance that the effect will be altogether a favorable one, though there seem to be intentions of curative cautery. It is a slightly terrific book, marked throughout its 754 pages by a sustained intensity of soul-struggle engaged in by an improbable, but morbidly fascinating assortment of over-wrought neurotic characters, some of whom are architects.

To acquaint herself with our profession, to which she was apparently attracted by a wholly emotional admiration for skyscrapers, Miss Rand worked for four months, several years ago, in the office of a well known New York architect. Here, with her purpose known only to her employer, she was given full access to all sorts of technical information involved in the carrying on of architectural practice. Here, also, she had opportunity to absorb from her fellow workers and their friends the prevalent philosophical theories of design and the sharp and somewhat cynical drafting room gossip regarding the lives and habits of leading architects of the day. From the impressions thus gained, she has compounded a series of characterizations in which are penetratingly high-lighted many of our professional weaknesses—and possibly a few virtues. This has been done skilfully so that none can be recognized as actual flesh and blood architects—yet most are plausible enough.

The trouble is that none of the types depicted even remotely resemble the serious, competent, wholly sane practitioners who are the real leaders of the profession. Possibly such persons are not sufficiently dramatic for a book of this sort, but, if a part of Miss Rand's purpose were to give a true picture of architecture and architects, she might at least have had one such first-rate man among her characters. Unfortunately, because of the omission, the average lay reader may draw the conclusion that all architects are either screwballs or hypocrites. He will certainly gain little in understanding of architecture itself if he uses Miss Rand's extremely vague descriptions of the works of her hero, Howard Roark, as a guide. God help us if the movies ever get hold of the story! The great novel of architecture is still to be written. —Kenneth Reid

* *"The Fountainhead," by Ayn Rand; Bobbs-Merrill, New York, N. Y. 754 pp. $3.00.*

The Airplane and Tomorrow's World

By Waldemar Kaempffert. Public Affairs Pamphlets. Published by the Public Affairs Committee, Inc., 30 Rockefeller Plaza, New York City. 1943. 10c.

This small but challenging booklet brings to public attention what is often spoken of lightly and seldom considered seriously, the tremendous possibilities of the airplane after the war. As Mr. Kaempffert points out, there have been far more developments made in this field than most men realize. And even at this date the possibilities of increased size, speed and durability have barely been touched upon in the many tests made during this war.

Feeling that the airplane is to play a major role henceforth in international politics he advises against the Peace Conference consideration of nationalism as a solution to world troubles and warns that because of the increased capacity of airplanes in the future no nation may count on a buffer state to save it from invasion. The nation having the greatest number of air vehicles will be the strongest in the future.

A new geography will be the outcome of use of the air for the flat Mercator map cannot be used in determining the shortest routes between cities for air travel. To most people the fact that the shortest route to most of Europe and Asia lies over the North Pole and not directly east or west will be surprising.

Cities, formerly on important water and railway trade routes, will no longer be important, for a whole new group of more convenient cities will replace them and Mr. Kaempffert believes that small communities and not cities like New York will be organized around an airport with complete services for travelers and transportation. As it effects a change in cities it touches, air travel has in the past and will more in the future tend to influence and speed up business transactions and encourage more international business than ever before.

Nationalism is a real obstacle to air commerce, for before the war so many regulations existed in each country that a complete system was impossible and flights rose and fell with political difficulties between nations.

Mr. Kaempffert, in closing, suggests that the only method for preserving peace is the establishment of an international group which will have at its disposal enough air might to count as a true international police force, and that secrecy about developments in the field of aeronautics should be eliminated and discoveries thrown open to all nations through an international research organization.

This publication has much to recommend it in its realistic approach to the many phases of air development. It has none of the Buck Rogers touch about it, even when it hints at huge stratospheric vehicles to come, but is based on knowledge of the many possibilities in the field of aviation.

—Margaret Greenough King

Plastics Catalog, 1943

Published by Plastics Catalog Corp., 122 E. 42nd St., New York 17, New York, 864 pages, $5.

This encyclopedia of the plastic industries, incongruously enough bound in a padded cover with gold decorations, contains between its old-fashioned binding the most modern and up-to-date information on plastics. The book opens up with a comprehensive history of plastics and traces the steps which, within a half century, have made out of laboratory experiments a giant and basic industry.

The volume is directed to users, designers, and manufacturers of plastics. While a basic knowledge of organic chemistry is necessary to understand a great part of the data presented, the man who wishes to use plastics, or design any product, will find plenty of information which he will need and understand. The book is so well organized, illustrated, and indexed that one can quickly find in it comprehensive information on any subject related to plastics.

The most commendable features of the publication are the charts which condense the contents of each paragraph into a tabulated form. These charts give valuable information on each phase of every variety of the material. Anyone who wishes to use plastics will find such information as workability, heat resistance, insulation capacity, resistance to temperatures, acids, weights, transparency, availability of various colors, physical and chemical properties, and any other characteristics one would look for, concisely tabulated. This information is made into readily usable data by presenting lists of the trade names and sources of supply and names of manufacturers of each type made.

Since plastics are going to be a basic building material, and because the science is so new, the use of this book will enable its readers to gain the basic information which will be necessary to judge the possibilities and practical value of the products which will be presented to the architect for his use.

Joseph Douglas Weiss, A.I.A.

* * *

Periodicals

Argentina

Revista de Arquitectura. (Issue for March) The national aspect of all of this country's architecture is evident in this issue. Almost the entire magazine is devoted to a new government building designed for housing research on petroleum. Oil is government controlled and so this building has real national importance. It is divided into three wings, administration, chemical experimentation, physics research and heavy machin-

(Continued on page 75)

Who Is American?

This month marks the anniversary of our nation's birth, a landmark in the long struggle for human freedom. The struggle still continues, and, as we go about our daily civilian tasks here in the United States of America, millions of our young men are locked in battle on foreign soil with the enemies of that freedom.

We are proud of these young men who risk their lives for American ideals. It is up to all of us who must stay at home to make very sure that their ideals are not destroyed here while they fight abroad.

What makes a man an American? Can you spot him by the spelling of his name? Is there any clue in his racial origin or in the color of his skin? Has his religious belief, or its absence, anything to do with it?

Of course not! It is the very essence of America that any human being, willing to subscribe to our principles of freedom and democracy, whether he is born in this country or not, is eligible to become a good and loyal citizen and to pass the privilege along to his progeny. (That we tolerate, in practice, exceptions to this rule, is no credit to us and is in conflict with the principles established by the founding fathers.)

In the years since 1776, men and women of all races have come here and contributed to the building of our country's present greatness. They have died, on occasions, in its defense. Look at any day's casualty list for evidence of the unexclusiveness of their sacrifice. Saxon and Slav; Teuton and Latin; Gentile and Jew; white, black, red, yellow, and brown—all are numbered among Americans. And representatives of all of these groups are ready to hazard everything they have so that freedom may be kept alive in the world.

Last month we published some letters from readers in which there was evidence of a feeling that being American was the exclusive privilege of those whose names had, to quote Roger Allen, "a plain old Anglo-Saxon ring." There was also the implication that good Americans should shut their eyes and ears to any ideas, irrespective of merit, originated or expressed by a foreigner. Alas, that any such limited conception of Americanism should exist today, when the enemy is seeking to divide us so that he may prevail! And alas, that any of us are so intellectually insecure that we are afraid, at any time, to contemplate a novel thought lest we accept it against our will!

One of the privileges of a free American is to express openly and fearlessly (though not maliciously) criticism of anything he chooses. One of our privileges as part of a free press is to print the views of those who differ with us as well as those who agree with us. We welcome criticism—and feel able to take it as well as to "dish it out." For it is through thoughtful and honest criticism that we all learn. This principle should be deeply rooted in every architect's being.

But let us all keep our arguments on a high and worthy plane and not become entangled in racialism or any other irrelevant and unbecoming prejudice. To do so is a part of the duty of every architect who regards himself as truly American.

THE ARCHITECTURAL CENTER

THE ARCHITECTURAL CENTER: an organization to coordinate building research, planning, design, and construction

by A. Lawrence Kocher and Howard Dearstyne, Architects

The Architectural Center proposes to investigate the psychological, social, economic, and technical aspects of building.

It will undertake to find sound basic solutions to the diverse problems confronting architecture and building.

It will work toward a better adjustment of the material framework of living to human physical and spiritual needs.

To accomplish these ends, it proposes the establishment of an organization uniting research with planning and design; design with experimental construction; and experiment with the "trial-by-use" of model buildings.

The Center proposes to draw upon and contribute to the work of research institutions elsewhere.

It will cooperate closely with industry in working out new fabrication processes, finding new uses for materials and developing new types of construction.

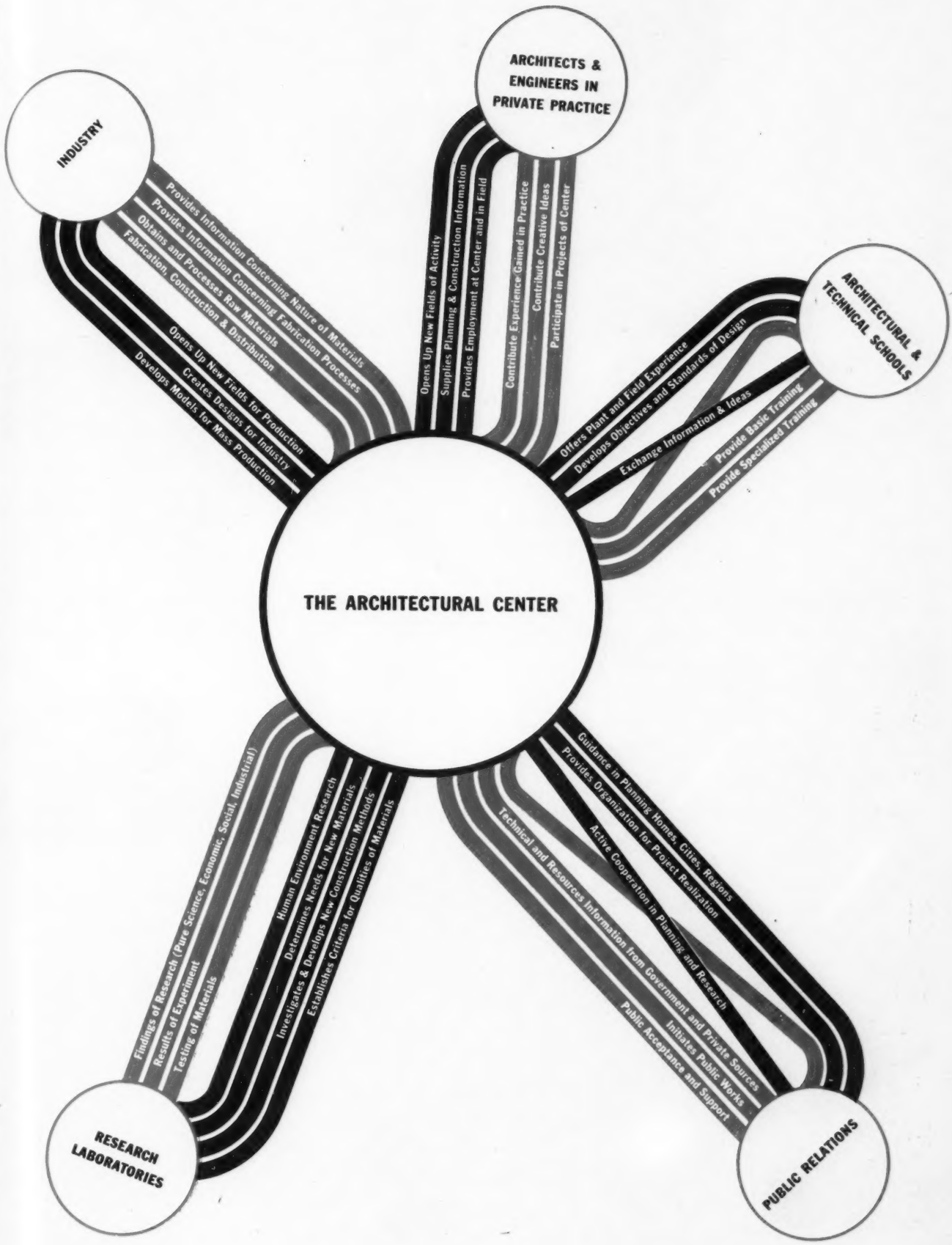
It will engage architects, engineers, planners and others to work at its plant and offer its assistance to professional men in private practice.

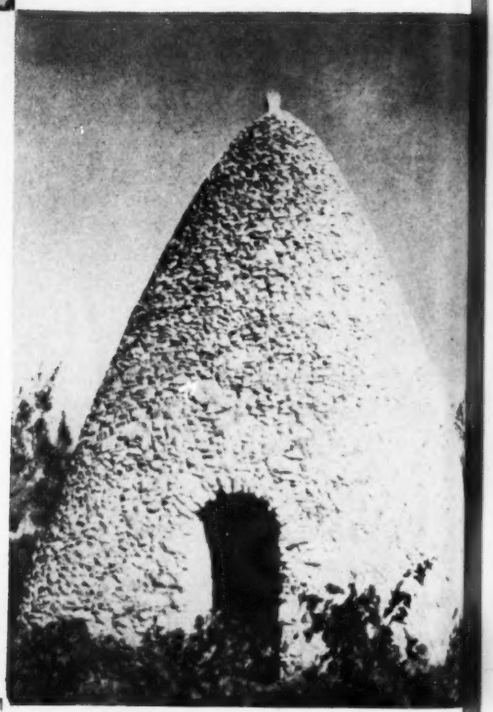
It will encourage schools of architecture and engineering to reorient their teaching and to exchange ideas and information with the Center.

It will seek to obtain public support for its program by guiding people to an understanding of its ideals and principles.

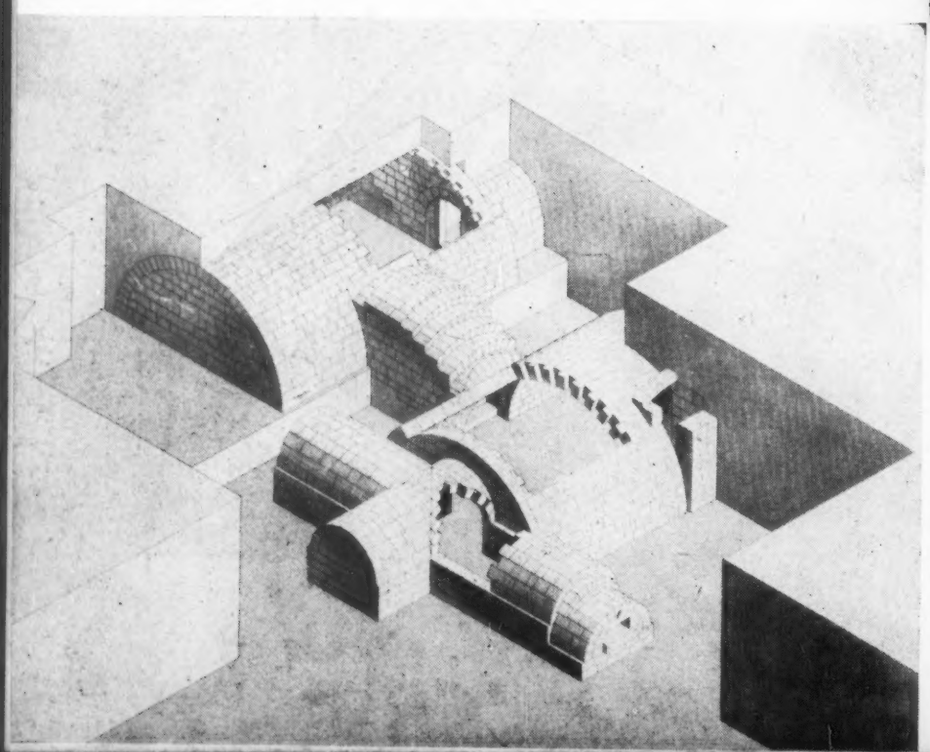
The diagram on the opposite page shows the relation of the Center to each of these five groups, and lists the chief ways in which they and the Center can cooperate in the task of remoulding our environment.

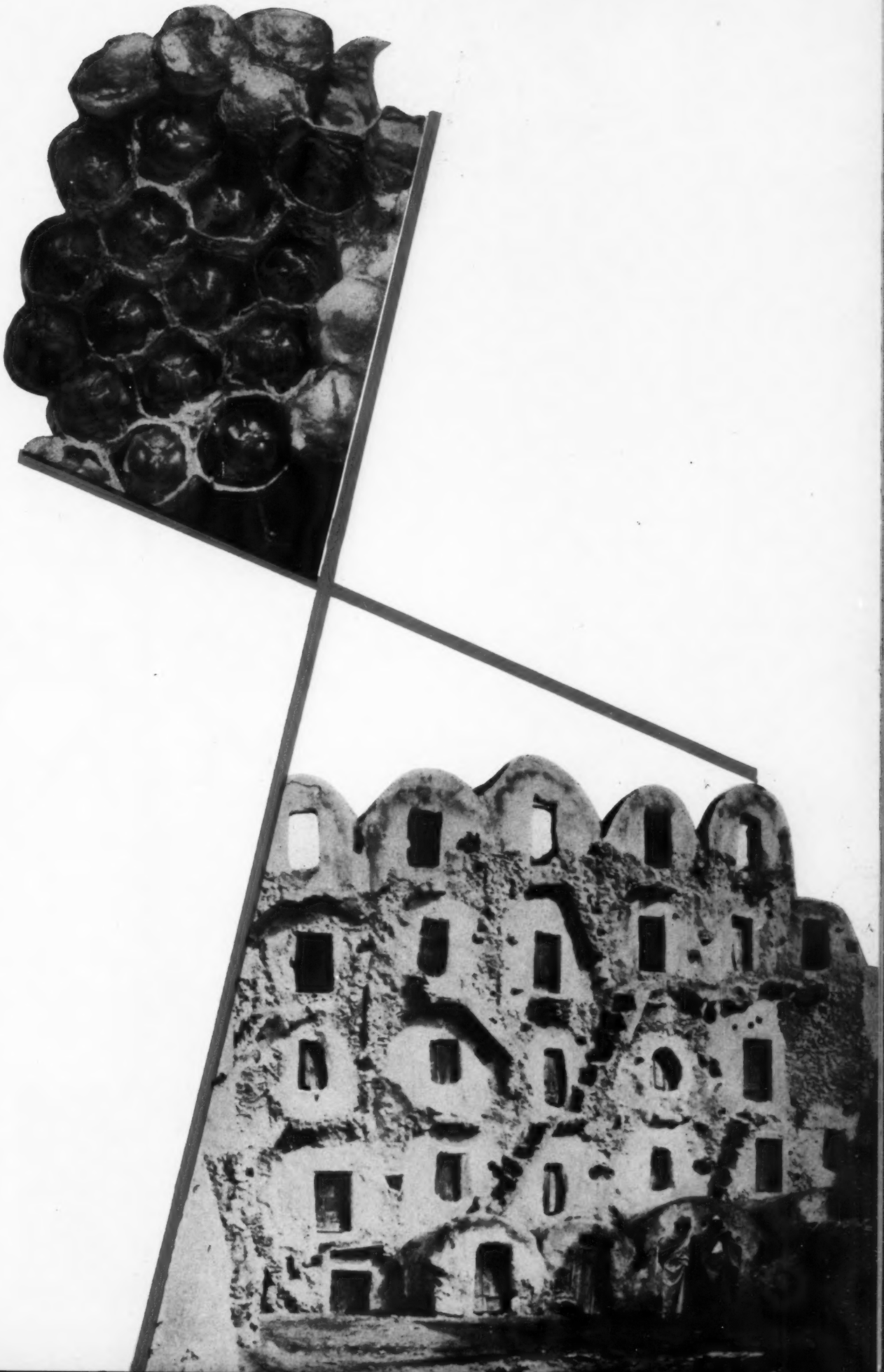
Drawing: Herbert Matter

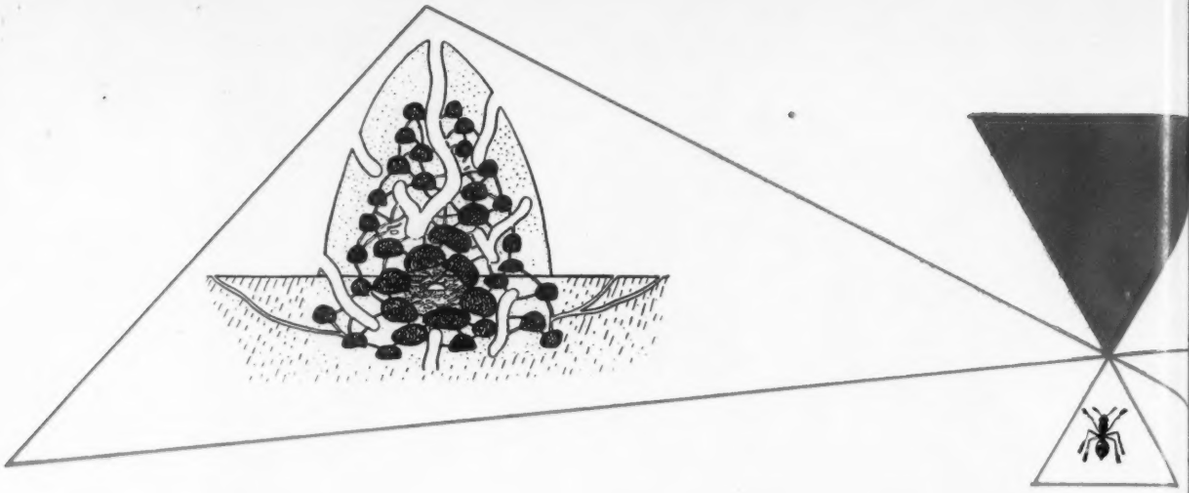

ARCHITECTS & ENGINEERS IN PRIVATE PRACTICE
INDUSTRY
ARCHITECTURAL & TECHNICAL SCHOOLS
THE ARCHITECTURAL CENTER
RESEARCH LABORATORIES
PUBLIC RELATIONS
Provides Information Concerning Nature of Materials
Provides Information Concerning Fabrication Processes
Obtains and Processes Raw Materials
Fabrication, Construction & Distribution
Opens Up New Fields for Production
Creates Designs for Industry
Develops Models for Mass Production
Opens Up New Fields of Activity
Supplies Planning & Construction Information
Provides Employment at Center and in Field
Contribute Experience Gained in Practice
Contribute Creative Ideas
Participate in Projects of Center
Offers Plant and Field Experience
Develops Objectives and Standards of Design
Exchange Information & Ideas
Provide Basic Training
Provide Specialized Training
Findings of Research (Pure Science, Economic, Social, Industrial)
Results of Experiment
Testing of Materials
Human Environment Research
Determines Needs for New Materials
Investigates & Develops New Construction Methods
Establishes Criteria for Qualities of Materials
Guidance in Planning Homes, Cities, Regions
Provides Organization for Project Realization
Active Cooperation in Planning and Research
Technical and Resources Information from Government and Private Sources
Initiates Public Works
Public Acceptance and Support

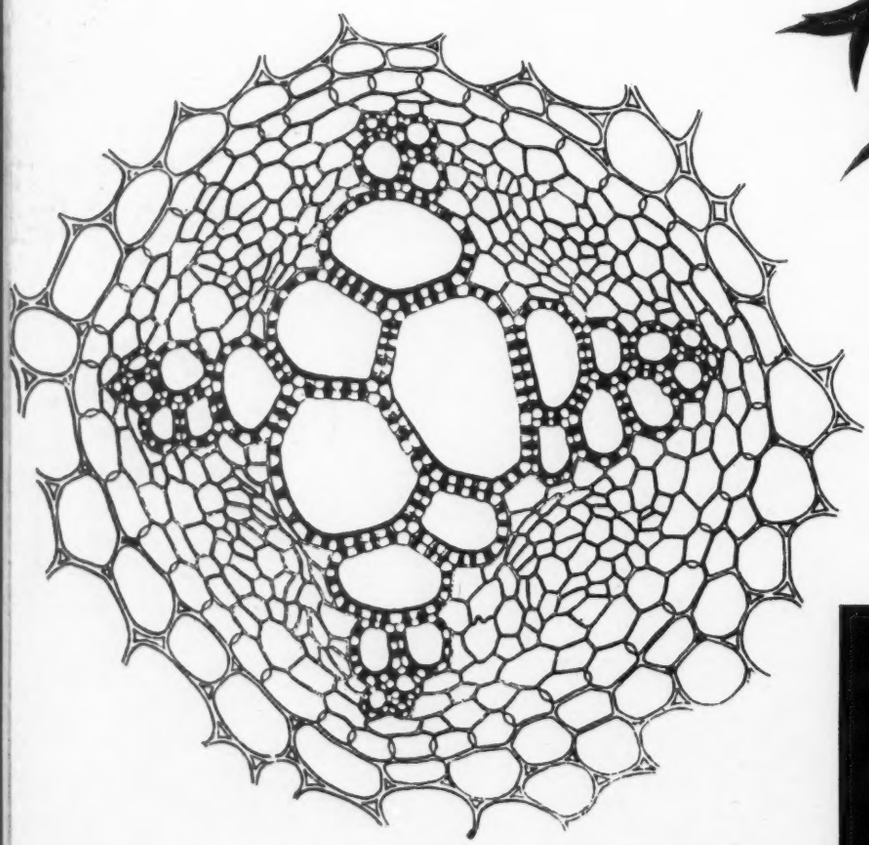


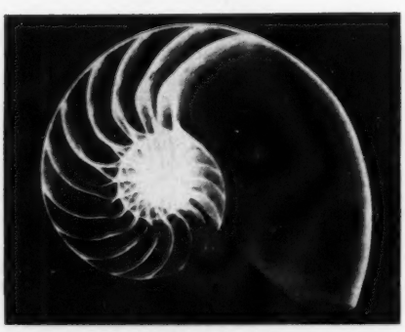
Herbert Matter selected and composed the material in this presentation. There is a veritable history of habitations to be read from the stilt house, New Guinea (Atlantis, *August 1934); the trullo from southern Italy* (Architettura Rurale *by Giuseppe Pagano and Guarniero Daniel); and the troglodyte dwelling in Medenine, southern Tunisia* (Atlantis).

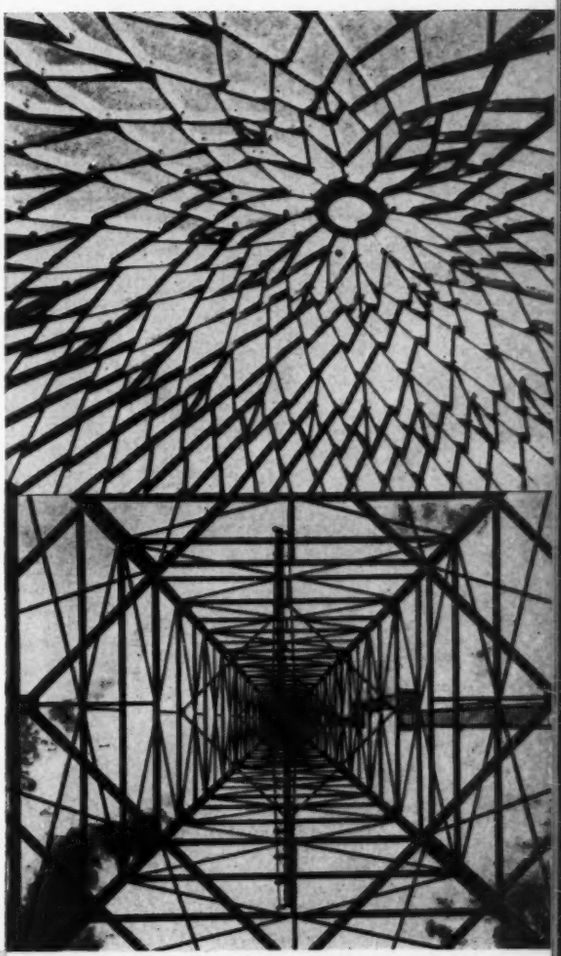


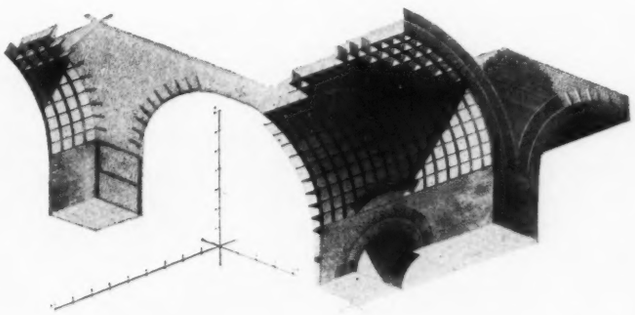


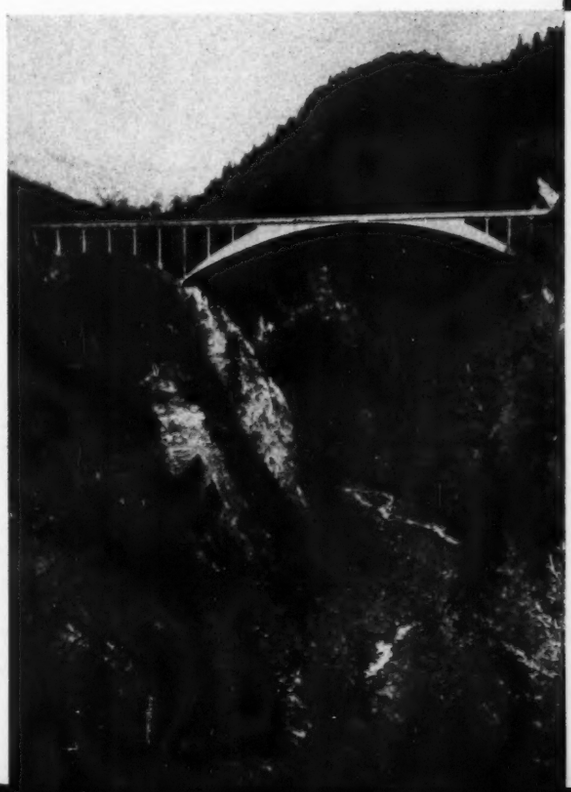




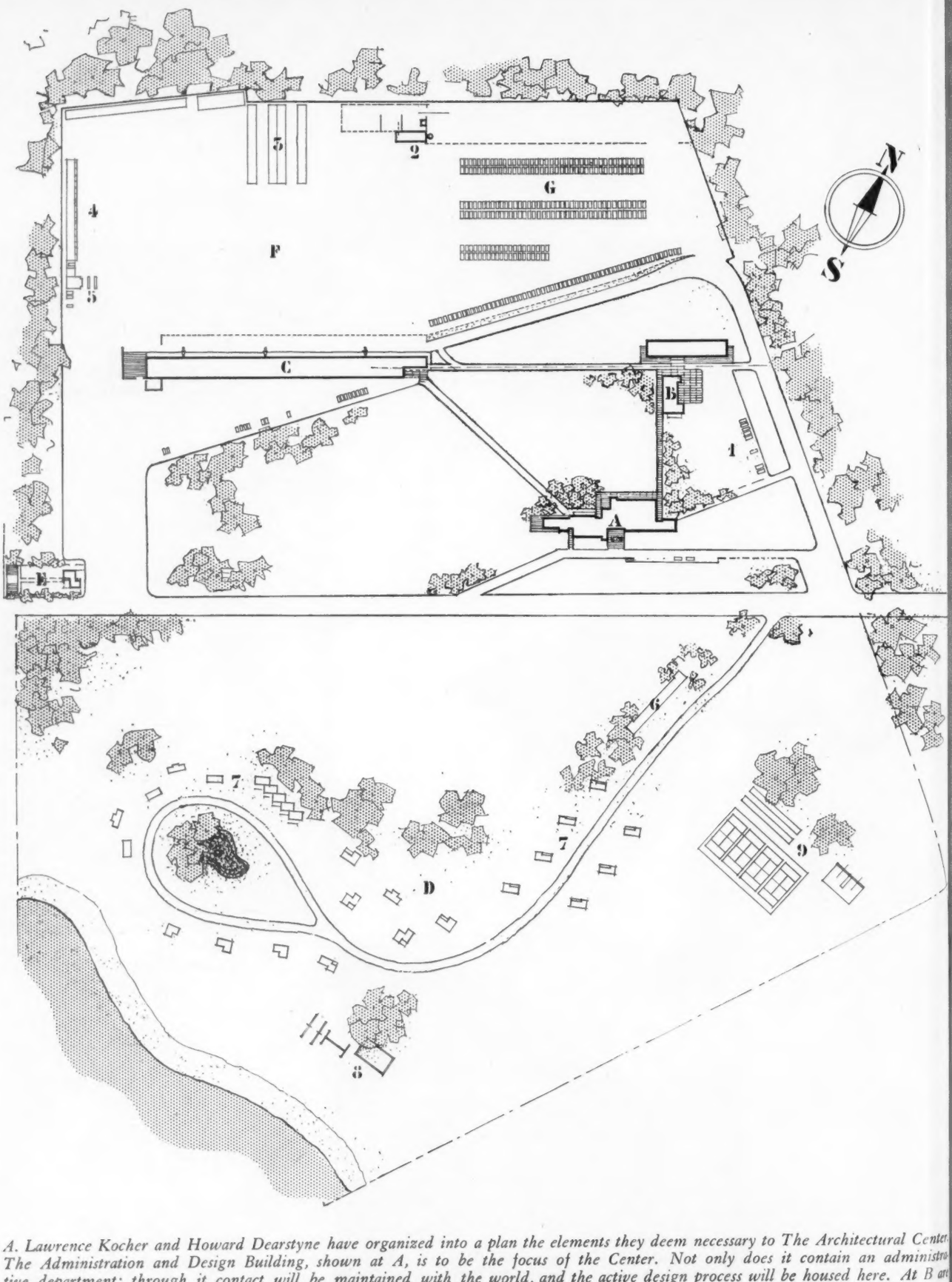








PLOT PLAN, the Architectural Center



A. Lawrence Kocher and Howard Dearstyne have organized into a plan the elements they deem necessary to The Architectural Center. The Administration and Design Building, shown at A, is to be the focus of the Center. Not only does it contain an administrative department; through it contact will be maintained with the world, and the active design process will be housed here. At B are the Human Environment Laboratories, in which technical, psychological, and esthetic experimentation will take place. The purpose is not only to test materials in the accepted ways; a more important function will be investigation into the effects of our physical environment (particularly buildings) on human beings.

The Shops and Assembly Building at C, houses the test-manufacturing procedures, in the course of which, by trial fabrication, new developments are to be readied for mass production. The yard, F, is for necessary construction machinery and materials. D is an Experimental Settlement, where buildings (prefabricated houses and others designed and built in the Center) are to be tested by actually having people live in them.

If Jean-le-Loup, struggling with his seven labors of selecting and preparing the site, designing the plan, laying the foundations, figuring the vaults, quarrying and transporting the stone and directing the masons to hew it and to set it, and the carvers to carve it, and the glaziers to cast the glass and lead it in place—if Jean, weary with the masterbuilder's multiple task of planning, engineering and superintending the construction of Reims, would pause for a few moments and look in on an architect at work today, one might expect him to deliver himself of some comments. "Tiens!" he would probably say drily, "des spécialistes! I permit them to make mes gargouilles et les chapiteaux du portail; oui . . . also perhaps la flèche . . . peut-être . . moi . . . I must make la cathédrale!"

We have our cathedrals to build today, but we aren't building them: we're sweating over the gargoyles and the details of the grand main entrance . . .

Our cathedrals are cities and dams and highway systems, bus and railroad terminals and airports; our churches are houses, schools, health centers, playgrounds, parks; our altars are sunlit rooms, comfortable furniture, sound sanitary equipment, and our prayer is for a far-sighted masterbuilder to lead us out of the wilderness of planless, devil-may-care cities, where the sun shines down, if it can, on the vacuous swankness of the rich and the seething squalor of the poor, a masterbuilder to lead us out of this hapless mess of masonry unfit for human work and habitation.

While each architect grinds out his own particular gargoyle, the cathedral is falling into a ruin unsafe for man and an abomination to God. And so, you Architects, "Eminent Craftsmen," we've made enough ghoulish gargoyles to grin at human discomfort and misery; let's restore the foundation walls of Notre Dame . . .

The Modern Masterbuilder

Our modern masterbuilder will not be a rugged, two-fisted architect-engineer like John the Wolf. Even the Wolf, for all his many talents, could not hope to encompass modern building science, master all the instruments immediately or remotely employed in creating a contemporary structure, and fully grasp the social and economic bases of the architecture of this latter-day world. We still sorely need Jean's breadth of vision; but along with this **we need an organization of many minds and many diverse talents working harmoniously together to solve the problems raised by the mechanization of our environment.** No single architect, engineer or planner can design and build a city: but cities must be built. No single expert can master the problems of the house, the school, the hospital; yet build these we must. Our cities are chaotic; our houses are bungling anachronisms. The instruments to create a new and better world are ready, the hands to wield them trained. We have only to use them.

Scope of the Center

The Architectural Center proposes to coordinate the widely-scattered instruments of modern techniques and unite under one management the many skills contributing to the creation of the structures and facilities which constitute the man-made framework of our lives. The architect, the engineer, the city and regional planner, the research scientist, the master mechanic, the production expert, the builder, the laborer, the social economist will pool their insight, experience and talent to form an organization equipped to undertake the task of bringing order into our physical environment. **The Architectural Center will have a significance to building similar to that which a medical center has to medicine. It will be an institution for the investigation and study of the human, social, economic and technical aspects of building, for the working out of sound and basic solutions to the diverse and complex problems confronting planning and architecture, and for the actual execution of construction projects.**

By such coordination of functions the effectiveness of each agency will be immeasurably increased. Problems which the architect or engineer, working alone or in sporadic cooperation, could scarcely cope with adequately, will be solved. The schism in the building arts will be healed; the ways of the architect, the engineer, the planner, and the manufacturer (the modern craftsman), which since the day of Jean-le-Loup have parted, will again converge.

Antecedents of the Center

In no historic period before ours have the building arts been so dispersed. Brunelleschi and Anthemius of Tralles would have shared Jean-le-Loup's dissatisfaction with our methods. The idea of reassembling the scattered tools of building is not new. It is implied in Frank Lloyd Wright's appeals for the application to building of the techniques of the machine. It received an early impetus in the founding in 1907 of the German "Werkbund," an association of architects, artists, craftsmen and industrialists, dedicated to the improvement, through cooperative effort, of architecture and the crafts. The Bauhaus, which combined instruction in planning, architecture and the arts, with training in metalworking, carpentry, weaving and other crafts, and which developed basic models of furniture, lighting equipment, etc. for mass fabrication by industry, and itself engaged in the practice of architecture, was, in a sense, the prototype of the Architectural Center. The "mamuts" of technical planning, composed of thousands of collaborators, and the "regional planning trusts" mentioned by Hannes Meyer in a recent article are its Soviet equivalent. The Design Research Unit recently established in England under Herbert Read to encourage cooperation of artists and designers with industry incorporates in its program many of the Center's ideals. The architect-engineer offices, which have sprung into existence throughout this country to handle efficiently vast wartime building projects, are a step in the same direction. That more extensive organizations of a similar type will be needed following the war becomes daily more apparent. And that such "super-offices" or architectural centers will become permanent institutions is altogether likely.*

Coordination of Research

The central idea of the Architectural Center is the coordination of functions and services already in existence. Although architects associate themselves with engineers in working out problems, the association is generally transitory and frequently superficial. **The Center proposes the continuous close association of architect and engineer, in order that structural and mechanical considerations may enter integrally into the work of design from the outset.** In spite of the fact that scientific and building-scientific laboratories exist throughout the country in industry, in the universities and in privately-endowed and public research institutions, nevertheless the valuable work of these institutions has never been coordinated and their discoveries related to building design. The Center proposes to assemble, review, and coordinate these findings, and make them, together with the results of the research carried out in its own laboratories, the foundation of its design.

Guidance of Public in Architecture

However successful may be the work of the Architectural Center in developing improved designs and techniques and new approaches to building and planning, it will fail in its purpose, as planning commissions and others in the past have frequently failed, if it does not succeed in bringing about general public understanding of its ideas and winning acceptance of its plans, projects and products. It becomes, therefore, a very essential function of the Center to instruct the public by the spoken word *(lectures at the plant and elsewhere and radio programs broadcast widely)*, by its writings *(the Center will publish books,*

* Hannes Meyer: "The Soviet Architect" (Task, No. 3, Oct. 1942)

periodicals and pamphlets), by direct visual means *(exhibitions at the plant and travelling exhibits, tours of its grounds, and the showing of its house models and other products in many cities),* and by the dissemination of its ideas and principles throughout the country by men educated at the plant as apprentice architects, engineers and technicians.

Because of the magnitude of its operations the Center will seek the sympathetic cooperation of official and semi-official bodies, such as those departments of city, state, and federal government concerned with planning and building, and voluntary organizations of citizens. It may be of interest here to note that the program advanced by the Architectural Center represents the implementation of suggestions and proposals for reorganization of our building industry, and a reorientation of planning, which over the course of a decade have been put forth repeatedly by the National Resources Planning Board and its predecessors.

The Center and Industry

Inasmuch as a fundamental purpose of the Center is to relate design to industry, it will establish cordial working relations with industrial concerns. It foresees the development, with industry, of a program of mutual assistance, wherein the Center will draw upon industry for advice concerning the uses of its raw materials and finished products, and information about their technical processes. In return it will provide industry with new designs and models for mass fabrication and indicate to it new fields for the employment of its productive potentialities.

Aid to Private Practice

In respect to the relation of the Architectural Center to the architectural and engineering professions, it should be made clear that **the Center does not intend to usurp the practice of smaller private firms.** The Center will engage in enterprises lying beyond the scope of these organizations, which will continue in the enjoyment of their customary work. It will, furthermore, in its central and subsidiary plants throughout the country, give employment to many technicians and professional men, and also engage them to assist in its field operations. **It will offer to architectural and engineering firms its facilities and advice in working out many problems in their practice which they are ill-equipped to handle.**

The Center as Builder

The Architectural Center will undertake as contractor, with the aid of local architects, the execution of housing projects, buildings and public works. Its main plant, and branch plants scattered throughout the country, will be provided with much of the machinery and equipment necessary for this purpose. To prevent needless duplication of equipment and to avoid competition with private contractors, it will sublet to them as much work as they are equipped to do competently. In all cases it will maintain a representative on the site to superintend construction.

Postwar Reconstruction

As a consequence of the nearly total cessation of building during the war the postwar period should bring with it in this country a tremendous volume of building. The Architectural Center and its branches form an instrument capable of coping with this problem. Since the United States doubtless will be deeply involved after the war in the physical rehabilitation of devastated portions of Europe and the Orient, and will assist in re-planning and rebuilding destroyed cities and public works, it will need planning and building organizations of unusual capacity. The Architectural Center represents a pattern for such organizations.

The House: An Unsolved Problem

The Center will plan and execute dams, bridges, highway networks, railroad and airplane terminals, schools, hospitals, office buildings and other large public and private works. It will also devote intensive study to things of smaller scale, but of crucial importance, such as the house and its setting, its furnishings and its equipment. This is the most significant architectural problem of modern times, but as yet we have failed to find for it a solution based on modern materials and techniques which fulfills the physical and spiritual needs of our day. Baffled by the problem, architects have sought guidance and comfort in the oracles of the past, with the result that we can with Thoreau affirm that "if one design to construct a dwelling house, it behooves him to exercise a little Yankee shrewdness, lest after all he find himself in a workhouse, a labyrinth without a clew, a museum, an almshouse, a prison, or a splendid mausoleum instead," and we can add to Thoreau's catalogue "a cheese box, a bonbonière, or a shoe."*

It doesn't require much Yankee shrewdness to observe that eminent firms of architects such as Smith and Palladio, Brown and Vitruvius—as well as Sears, Woolworth and Ward—have failed to make the bus. **If we are to have a sound domestic architecture, we must turn from the imitation, however erudite or ingenious, of both dead styles and current fads, and seek it at the fountainhead of all good architecture, the life of the times and the tools at hand.**

Pre-Design Research

The Architectural Center will, therefore, begin by investigating human needs and reactions. In the Human Environment Laboratories human physical and psychological reactions to the physical features of our environment will be studied—both natural and man-made things, but especially buildings and building interiors. The work in these laboratories will be both of a purely scientific, general nature, and of a specific, applied kind related to definite problems in house, or other, design.

This "pre-design" research, together with findings in the field of construction, strength and uses of materials, etc., made in the workshops and laboratories of the Shops and Assembly Building (and drawn from collaborating research institutions elsewhere), will form the basis of planning and design. Houses and other types of buildings will be designed to satisfy human needs and preferences revealed in the course of environment studies, and to exploit new construction possibilities opened up by investigation and experiment. Design will be closely interwoven with human and physical research, and architects, engineers, and planners will maintain constant contact with investigators in the Human Environment Laboratories, and with technicians in the Shops and Assembly Building.

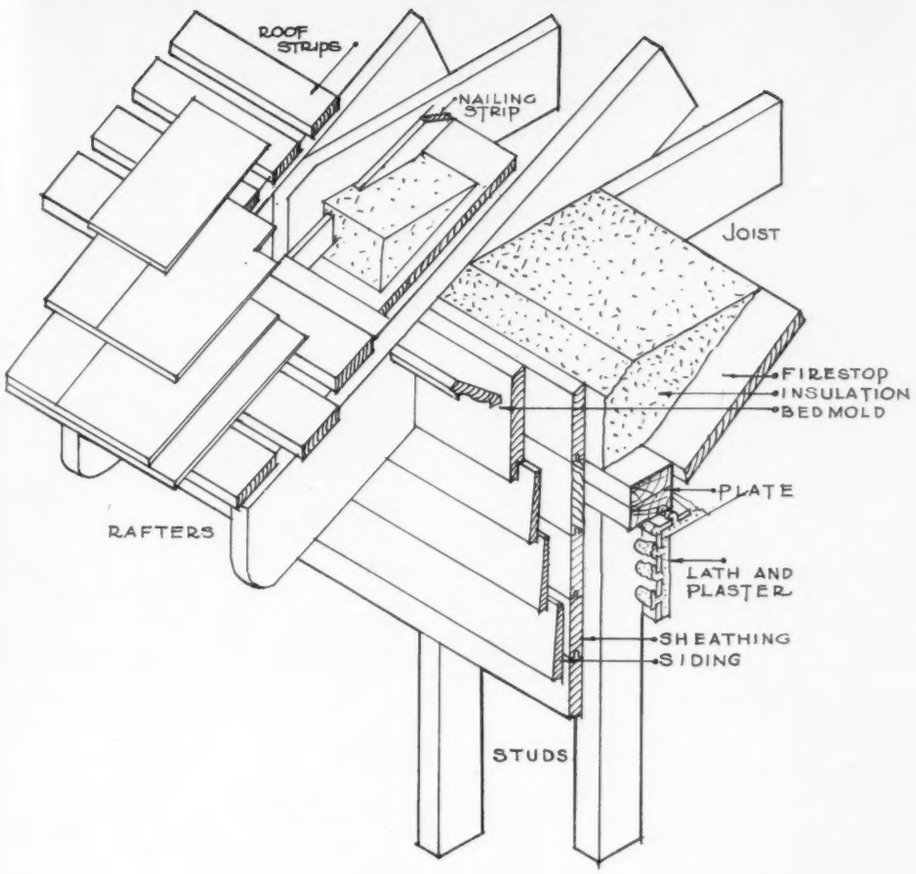
Trial by Use

In the case of a house in the process of design, a full-scale model will be constructed in the Human Environment Laboratories, and revised frequently as studies proceed. Human reactions to forms and proportions, color combinations, conditions of natural lighting and types of artificial illumination, orientation, acoustics, heating and ventilation, etc., will be studied, with investigators of the Laboratories, employees of the Center, and visitors who are willing to participate, as subjects.

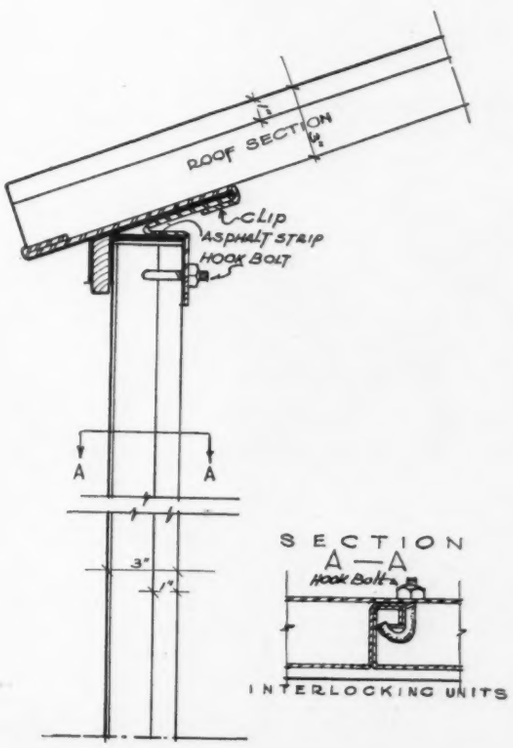
When a design has been thoroughly developed in the drafting room and tested in study-models in the Human Environment Laboratories, it will be placed in fabrication in the Shops and Assembly Building. Here shop drawings and construction details will be prepared. The elements of the house (except for special parts and equipment which will be manufactured elsewhere) will be made and erected provisionally. When problems of assembly have been solved, the house model will be demounted and transported to that area of the grounds designated as the "Experimental Settlement." Here it will be erected on a site already prepared for it, and then fully equipped and furnished. Several of each type, or several variations, will be built.

The models, however carefully designed and built, are not yet ready for the market. They must be tested, as to soundness of

* Henry Thoreau, "Walden", 1845.



Above is a typical detail of conventional frame construction, taken from an actual example. The almost countless pieces of wood, the innumerable hand operations involved, contrast vividly with the simplicity of the comparable section of a prefabricated steel structure. This is one of the strongest arguments Messrs. Kocher and Dearstyne produce—not just for prefabrication, but for a design process which takes full advantage of machine civilization.

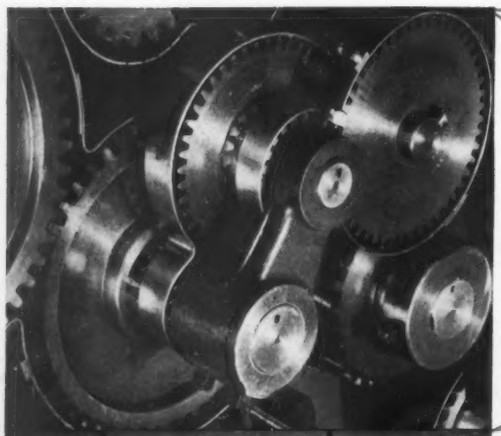


structure, efficiency of mechanical equipment, and livableness. The latter embraces both order and rationality in layout and a relationship of parts affording satisfaction, on the spiritual plane.

Perhaps the most critical judges of the workability of these houses will be the persons who conceive and build them. Therefore, officials of the Center, designers from the drafting room, technicians and scientists from the Human Environment Laboratories, and mechanics and workmen from the Shops and Assembly Building, will be invited to live in these houses, to establish by actual use their advantages and defects. Each new model will be tested by use in this manner for several months before being considered "ripe." Mistakes will be noted, investigated, and corrected in corresponding models. It is to be expected that during this "trial by use" period ideas for improvements will occur to the occupants. These will be considered, and when found feasible, will be incorporated in revised designs. When possible, such modifications will be made in the occupied houses in order to test them more fully. After being tested in this manner, the houses are ready for mass production by industry.

Fabrication and Erection

Complete plans and specifications will be furnished to industrial firms chosen to produce the houses in quantity. These firms will doubtless subcontract portions of the work. The completed house elements will be delivered to the Architectural Center or its branches, or directly to building sites. As before noted, the houses may be built either by erection crews trained and employed by the Center or by local building contractors.



Development of Site Plan

When given the contract for the execution of a project comprising a number of houses, community buildings and other structures, the Center's planning specialists and engineers will examine the site and record all pertinent data. With this as a basis they will develop a site plan wherein each building is given the most favorable position and orientation, and the whole group organic interrelationship. Prevailing temperatures, winds and rainfall will receive due consideration, as well as access to and circulation within the settlement, and care will be taken to preserve valuable natural features of the landscape and to enhance the natural advantages of the site. Grading and planting will be carried out by the Center, or by others working under its direction.

Large-Scale Operations

The procedure followed by the Center in the case of houses will also be followed, in the main, in carrying out other projects such as hospitals, schools, office buildings, etc. In such cases typical rooms or critical portions of the buildings will be built and studied in the Human Environment Laboratories. In the Shops and Assembly Building, sections and parts will be studied from the structural standpoint. Certain smaller buildings adaptable to standardization, such as bus and filling stations, community halls, rural clinics and health centers, roadside markets, etc., may be erected in their entirety in the Experimental Settlement, for the use of the dwellers there and the contiguous neighborhood. As in the case of houses, buildings which can be prefabricated will be farmed out to other plants for manufacture and assembly.

Projects of such magnitude as constructing a dam, a large bridge with its highway or railroad approaches, replanning a city, or rebuilding a devastated area will be studied, planned, and executed according to a program arranged to meet the particular requirements of the project. In such undertakings, field offices (or if the size of the project warrants it, branch centers) will be set up near the scene of operations; such additional research, planning, technical and field personnel as are needed will be added to the staff, and experts in various specialized fields will be called in as consultants. Thus the Architectural Center will be a flexible organization, responding to extraordinary demands upon it by increasing its personnel and expanding its facilities. However, it will maintain at all times a sizable basic staff to care for normal jobs and to pursue its unremitting work of investigation into matters

Photos on page 36, F. S. Lincoln; on this page, Fairchild Aerial Surveys.

of building: invention of new types of construction; creation of improved designs for houses and other building types, and the equipment for these; development of new principles in city and regional planning; and dissemination of the results of its endeavors.

Organic Design

In the solution of a problem in design the Center will be guided by such considerations as the function of the thing designed and the structure and nature of the materials of which it is made. It will seek to find the most straightforward solution for each problem, employing technical understanding and creative insight, a recognition of the potentialities of materials and the appropriateness of forms. No structure, part, or device is necessarily solved when it has been found to be technically adequate; by the same token, it may still be incomplete or defective when its external form has been refined to the point of satisfying the senses. **The structure or object must be as nearly as possible perfect when judged by any and all of the standards by which it may with reason be judged; it must adequately fulfill its function, and at the same time embody this function in a form appealing to the eye. It must have organic quality comparable to that found in living things, but it must not seek this unity by imitating natural forms. And like these it must be free of any romantic or formalistic non-functioning superfluities.** When a form has grown organically out of the purpose for which it is intended and out of an honest use of good materials, it will be satisfying without embellishment. To give it "beauty treatment" is to admit defective design, faulty workmanship or poor materials, or to accuse the public tacitly of immature understanding. The Center recognizes the need to refine the product so that it is sufficient in itself, and to aid the public in acquiring an appreciation of good design, sound workmanship, and organic form.

Design Standards

A natural consequence of economy of design will be the emergence of elements which for the time being (until the appearance of new materials and techniques) may be looked upon as final solutions. These can then be fixed upon as standards, to be employed in more complex objects, in the planning of which these standard elements will become basic determining factors.

That progressive refinement of an object of use brings it to the point of substantial perfection, where little further improvement is possible, and at which stage it continues in use more or less unmodified until it is superseded by a more efficient instrument of a different character, is illustrated by many inventions. A few examples: hand tools (hammer and axe); musical instruments: (violin and grand piano); lighting devices (the Welsbach gas mantle); wheeled vehicles (bicycle and buggy); boats (canoe and sailboat); aircraft (the balloon—the airplane is swiftly approaching perfection); power producing machines (windmill and water turbine); devices to enhance the effectiveness of power (screw, lever, pulley, and winch); construction devices or systems (masonry arch, groin and barrel vaults, flying buttress, dome on pendentives, the steel truss, braced and balloon frame construction.) Many of these inventions are still in active use after centuries of service; many are anachronistic and superseded, except in technically retarded parts of the world; almost all have attained full maturity, and, except for occasional capricious variations, will remain stable until they are eventually displaced by more effective instruments.

In like manner, many standardized structural elements have been tested so long and so thoroughly that optimum conditions for their manufacture, and the shapes and dimensions best fitted to meet a wide range of building conditions, may be said to be determined and established. In such cases, deviation from these established norms, unless under exceptional circumstances, may be characterized as wasteful and unwarranted. As long as they continue in use, or until the discovery of some significant improvement in fabrication or advance in the physical chemistry underlying their composition, it would seem to be greatly to our advantage to retain them, since they have been found satisfactory and are generally accepted.

Many building elements, more complicated and specialized, have also become standardized by agreement among manufacturers, or have been recommended for standardization by the Department of Commerce and the American Standards Association. Virtually all companies have set up systems of stock shapes and sizes in order to simplify fabrication and reduce costs. Essential utilitarian elements such as these are frequently crucial in design, determining in many cases the sizes and shapes of the rooms in which they are used. **All such basic factors should be, as many already have been, reduced to their essentials, given a form proceeding out of (and expressing) their function, manufactured in acceptable sizes and weights, and established as standards of design, to be changed or varied only when required by special conditions or when their retention would deprive the public of instruments more useful or economical.**

Design standards should be chosen with great care—whether they be the relatively simple repetitive units constituting the structural skeleton of a building; the enclosing skin (roof and walls); the more differentiated features to serve circulation (doors, stairs, lifts); admit light and air (windows); provide services—illumination, water, heat, power (bath, kitchen, heating and ventilating equipment), or to perform other essential functions. To fabricate in quantity and distribute as finished models of excellence, elements ill-adapted to their uses, technically faulty or ugly in form, would be unfortunate. Many more such standards than now exist can be established, after painstaking research. It will be one of the cardinal purposes of the Architectural Center to review existing structural elements, devices and equipment; to nominate some already fully-matured products for inclusion in the hierarchy of design standards; to encourage, or itself undertake, redesigning certain others which, though well-advanced, are still in some respects incomplete; and to study and develop basic designs for many things whose standardization still remains unattempted.

When a sufficient number of these fundamental problems have been solved, the architect will have a repertory of building elements. He will no longer need to dissipate time and energy in designing basic utilitarian or structural features—in other words, to make his tools before getting down to work. These ever-recurring preliminary problems will already have been solved, enabling him to plunge forthwith into the more fruitful work of organizing these basic parts into those more significant and complex wholes, buildings and structures of all types, which it is his chief duty to create. The architect should stand at all times on the frontiers of enterprise and experiment, fully armed with weapons tried and proven, prepared and eager to set forth into uncharted territory.

To many, no doubt, the term "standardization" is synonymous with regimentation. To these individuals, it would signify restriction of freedom of choice, fettering of creative imagination, and stultifying uniformity. These misgivings would be unfounded. No architect of sense would wish to reduce the earth to rubber-stamped anonymity, even if he might fill it with glory-haloed Parthenons or faithful replicas of Reims. The protagonists of the Center are far from desiring to preside at the dismemberment of the creative impulse. They seek to free it. They devoutly wish to eliminate duplication of effort, and to discourage the shallow pursuit of fads wherein innovation and non-conformity masquerade as quality.

This should and can be accomplished without recourse to any form of public coercion. The establishment of such standards would be justified only if they represented a better product—at a cheaper price, when possible. If the merit of the product is real, the public will be quick to grasp this and accept it. (It will prosper without benefit of the unceasing, unscrupulous, moronic radio build-up—the boost magnificent, the plug de luxe.) The Model T of hal-

lowed memory completely lapped its field and held the lead for many years on the strength of its demonstrated superiority. Its soundness and reliability (oh, Lord, not its looks!) were ample recommendation in a day when Gabriel Heatter was still a mere stripling, as yet unaware of his coming messianic mission. Mies van der Rohe's steel-tubular, "cantilever" chair, possessing in its yielding, spring-like action the advantages of the rocking-chair, is an example of an article of use brought to perfection. The principle of this chair represents a recognition and full utilization of the potentialities of the material and carried out in one material or another (steel, bentwood, plywood) it has swept 'round the world. Plenty of further examples might be educed to prove that the thing of quality, which serves its purpose well, will force the spurious product from the market. The public, to be sure, is often taken in by double-barrelled nonsense, but it also fortunately recognizes a good thing when it sees it.

Standardization and design standards are scarcely new ideas. Anything made by man, which has been considered worthy of repeated reproduction, is a standardized product. The first builder to reinforce a chunk of clay with straw and bake it in the sun created a standard for design and construction. The repetition of this brick in a uniform size was logical and useful, since it reduced the number of tools required in its manufacture, and simplified the process of laying up the wall. The Greeks in creating their three orders of architecture established standards of design in stone of far-reaching significance and usefulness. The determination of the component parts of the column and entablature, and the fixing of their relative proportions was a slow collaborative process in which many successive generations of architects had a hand. Nor was the standardization of the elements ever, even in Roman times, so complete as to exclude the play of fancy in selecting details and determining proportions. Indeed it was only in modern times, when, because steel and concrete had replaced masonry as the structural basis of our architecture, the orders had lost their vitality and usefulness, that we find an exact, uncreative reproduction of details and proportions found in established models or recommended by handbooks. **The usefulness of the orders lay in the fact that they served the architect as a vocabulary of more or less definitely established forms, which he could employ as the basis of his creative design. They were to the external embellishment of his architecture what the brick was to the structure of a Babylonian wall, i.e., they simplified the architect's task by reducing to a few elements the possibilities of choice, giving him fuller control of his problem and enabling him to concentrate on the refinement of the whole.** The maturing of a style of architecture or of a structural system has always been a long and tedious process requiring generations or centuries of effort, wherein step for step the elements of style or structure become crystallized and known (standardized), and form instruments serviceable to the architect in the gradual achievement of a finished form.

We have sought to indicate the need for developing design standards: fundamental structural units, more complex building elements, or equipment, or other articles of use, so thoroughly studied or completely solved in design and workmanship that they can be used by the architect without further improvement as basic instruments of design. We have also indicated that the existence and use of such a body of design tools or instruments would rather greatly aid the architect than hamper him in his creative work. The opinion has been expressed that the presence on the market of many things of evident high quality would eliminate inferior products from the running and consequently tend to reduce the meaningless duplication of things affecting to serve the same purpose, and make the public more critical of the products offered to it for purchase.

Prefabrication and Its Relation to Design Standards

"And the house, when it was in building, was built of stone made ready before it was brought thither; so that there was neither hammer nor ax nor any tool of iron heard in the house, while it was

in building" So King Solomon in his wisdom used the methods of prefabrication in the building of the Temple. And since the term has latterly become a household word, it will be well to define it at the outset.*

Prefabrication simply means construction in the factory, as distinct from construction in the field. Any part or thing destined for erection elsewhere, which is completed, partially or wholly, before leaving the factory, may be called prefabricated. In this sense a common brick, or a piece of timber cut to size, is prefabricated. To do the term justice, however, as it is at present understood, we must qualify the definition by saying that prefabrication refers especially to the performance of construction operations within the factory which have hitherto for the most part been accomplished in the field.

The chief arguments advanced to support a wider use of prefabrication in building are: that it makes for more accurate workmanship because the inequalities of hand work are wholly or partly eliminated; and that it reduces building costs because machine labor is cheaper than hand labor. Further, it speeds up large building operations, especially when field construction facilities are limited; witness the amazingly increased rate of production at the Kaiser shipyards as a result of introducing prefabrication, a method new to shipbuilding.

As to the efficacy of prefabrication in reducing building costs, experience up to the present indicates that it is able to accomplish this only when prefabricated products are employed in such numbers that mass production methods can be employed in their manufacture. In the present emergency we are using prefabrication on a mass-production scale. This should test the contention that the method makes possible cheaper production without loss of quality, or with actually an increase in quality. The sponsors of the Center believe that this contention will be proven accurate. Mass-production methods have reduced cost and raised quality in other fields. There is no reason to believe that they will be less effective when applied to the building industry.

Whether or not structures made largely by machine are higher in quality depends on the way the machine is used. Machines can work with far greater precision than human hands, but they can also be geared to shoddy performance. Furthermore, the most careful execution cannot atone for faulty design. It will be one of the functions of the Center to promote the wider use of prefabrication. The Center will set a high standard of design in models for mass production, and it will insist upon high quality of workmanship in their execution. It foresees the extension of prefabrication to all types of building, since there is no logical reason why the method should be confined to house construction.

There is an intimate relation between establishment of design standards and this extension of machine methods of production. In fact, one of the cardinal purposes of simplifying, clarifying, and standardizing the design of building elements is to facilitate their mass production.

In general three types of things will be brought to perfection and produced in quantity by machine. The first two affect building directly, and the third indirectly. First is the structural element, such as wall and partition panels, or parts of a structural framework, as beams and posts, etc. The second general type is illustrated by the door, the window or the metal stair, parts which are more or less specialized and differentiated, but which are useful only when combined with other elements. The third group is composed of objects largely self-sufficient in themselves, although they may be used in buildings: articles of furniture; things of use (for instance, a watch); machines (a typewriter or an automobile), and even buildings of moderate size (a filling station). None of these must be designed and made in isolation one from the other, but rather always with consideration for the requirements of other elements with which they are associated. Sizes and connections will have been fully worked out beforehand, so that assembly at the site will be simple. Thus a door or window would be so designed as to be easily used in combination with a wall panel; a series of cabinets of standard sizes would be so detailed as to work readily with standard interior and exterior wall elements, etc. Much progress has already been made in this direction, but the work must be carried further. Apparently, the most difficult building elements to prefabricate or "pre-install" (install in the factory) are piping and ducts for water supply, heating and plumbing, and wiring. It is likely that a substantial amount of installation will be done in panels at the factory, but much interconnection must continue to be done at the site.

* I Kings 6.7.

Closer Cooperation Between Designer and Fabricator

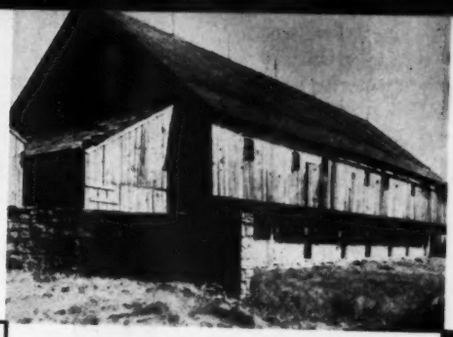
Far from competing with industry, it is the intention of the Center to work closely with manufacturers, to the mutual advantage of both. It is, indeed, in the closer collaboration of all the productive forces contributing to building that the protagonists of the Center see the greatest opportunity for advance. To a great extent the architecture of the future will cease to be hand work, and will, in the manner of its production, become the creation of the machine. It becomes necessary for architects, engineers and planners to be intimately acquainted with machines and manufacturing processes if their creations are to be sound and vital. Many ways of thinking, surviving from the time when buildings were constructed mostly by hand labor, must be cast off. In adjusting himself to the machine the designer is not subjecting himself to its tyranny, but wisely recognizing its capabilities and limitations. Sound workmen have always respected their tools and their materials, and have required only those things of them which lay in their nature to accomplish.

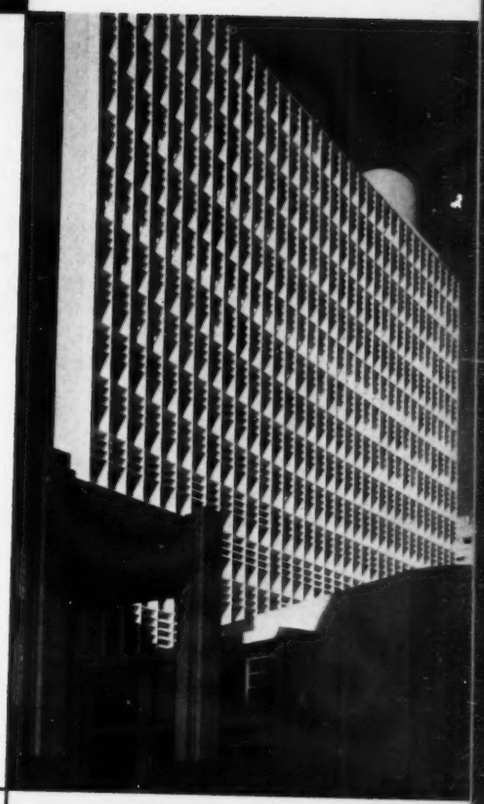
Recognizing this need for a thorough acquaintance with the processes of manufacture, the sponsors of the Center believe that the ideally constituted architectural-engineering office of the future will have in close association with it a plant to execute models of its designs, if not to mass-produce them. Hence, its sponsors consider the Shops and Assembly Building a vital part of the Architectural Center.

If it is important for the architect to become versed in the ways of the machine, it is the duty of industry (to itself as well as to the public) to acquaint itself with the broadly-based standpoint, the philosophy, so to speak, of the architect-designer. To the extent that most industrial plants have a drafting office and employ architects, engineers and designers, this union of the creative and the executive has already taken place in industry. It may be said with considerable justice, however, that today such creative elements are usually appendages performing the limited service of satisfying the plant's immediate, specialized requirements. They lack the wider creative vision which is the most significant attribute of the genuinely creative architect. Industry must accord the creative thinker more latitude, and must attempt to understand his viewpoint, since his contribution is essential to the maintenance of balance and vitality.

There is no sane reason for the cleft between the thinking of those who conceive and those who execute, since both are working with the same tools to a common end. The Center will seek to close this cleft.

The Center will, therefore, both by example and precept, encourage the closer cooperation of all of the factors entering into the production of buildings and their equipment. It will also serve industry in ways more definite and direct. It will furnish standardized patterns and contract with industry for their mass production models. And it will offer industry the facilities of its laboratories and the advice of its experts, to aid it in solving unusual





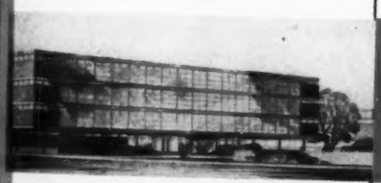


Photo of Pennsylvania Barn Charles Dornbusch; Ministry of Education and Health, Rio de Janeiro, G. E. Kidder-Smith, AIA, and Museum of Modern Art; Le Corbusier villa, Museum of Modern Art.

problems involving special experience. It may be asked to pass upon, or suggest improvements to, a model which some concern is preparing for market. The Center will be pleased to extend such assistance, since it seeks to propagate its ideas widely.

On the other hand, the Center will also approach industry, and technical and research organizations throughout the land, for assistance in solving many of its own problems. Despite the comprehensiveness of its personnel and equipment, the Center cannot hope to encompass in its organization all the necessary instruments of investigation and experiment. It cannot hope—and does not seek—to duplicate the work of the many laboratories of pure science. Its Human Environment Laboratories, in investigating human reactions to our man-made environment, will function in the field of applied psychology; very essential psychological facts (and information of a more general nature) will be obtained from outside laboratories and specialists. Economic and social data it must also obtain elsewhere. In short, where greater experience in various fields exists, or where superior equipment is on hand for solving special problems, the Center will gladly make use of them. It will be neither jealous of its own ideas and discoveries, nor reluctant to make use of ideas evolved by others. The Center will encourage the same free interchange of ideas and information within the field of building which has long obtained among investigators in the world of science.

Relation of the Center to the Building Professions

We have already sketched briefly the relation of the Architectural Center to the individual architect, engineer and planner. It may be well to explain in greater detail how the establishment of this Center, or of a number of such Centers in various parts of the country, would affect the private practitioner.

In the first place, one of the chief purposes in the establishment of the Center is to create an organization able to cope with problems of great magnitude. Most of the smaller jobs which normally fall to the lot of organizations of moderate size will continue in their hands. Tasks of city planning and building, large-scale housing projects, public works projects, etc., which the average architect or engineer is ill-equipped to handle adequately, will constitute the field in which the Center will for the most part operate.

Many architects, engineers and planners will be drawn to the Center as collaborating experts, in much the same way as specialists in many branches of medicine pool their abilities in the huge Columbia Presbyterian Medical Center in New York City. Such a concentration of diverse talents and facilities in a single organization places the large-sized medical center in a position to attack problems and offer services quite beyond the reach of smaller hospitals. An organization such as the Architectural Center, similarly uniting in one body the various factors entering into the production of architecture, will have corresponding potentialities for work within the field of building. Just as a physician profits by association with gifted specialists, so will the individual architect, designer, engineer or planner derive valuable experience, stimulation and support by association with creators of the first rank in the fields of design, planning and engineering. Participants in the large-scale work of the Center will have opportunities for broadening their experience which their more restricted individual practice would never offer them. Furthermore, they will have at their disposal facilities for study and experiment which, working alone, they could never hope to provide. As against these advantages, the sacrifice to some degree of the initiative they possessed as architects in private practice, a freedom of enterprise which in this present day world is more illusory than real, would seem to lose significance.

In addition to giving the individual architect and engineer the opportunity of participating directly in its work, the Center will offer those in private practice consultive services, to aid them in solving problems beyond their experience or equipment. The Center will give them advice and information in much the same way that a large agricultural research station (such as that at Cornell University) assists the farmer. This consultive service should be effective in raising the standards of architecture.

The Center may be expected to open up to architects new fields for work. The architectural and engineering professions in general will profit from this extension of the scope of their practice. A further significant consequence should be enhancement of the prestige of the profession. This would be advantageous to all architects and engineers everywhere.

The Center as a School

The most efficacious teaching combines theoretical training with practical experience. Our architectural schools have for generations concentrated upon theory and neglected, almost altogether, actual participation in building operations. And so little contact has been maintained between architectural and engineering schools that the breach between these two branches of a single subject has steadily widened.

Finally, the training of architects (and of engineers as well) has been woefully one-sided. Even in design, teaching has more frequently than not been superficial, inept, and uninspiring. The primary reason is, of course, the lack of understanding on the part of educators of the fundamentals of architecture, and a misinterpretation of architectural history. Despite their not infrequent erudition, professors of architecture and critics in design have failed to learn the most salient lesson that an examination of the architecture of the past can teach us; that is, that architecture, like all the other arts, is ever readjusting itself to life as the mode of living changes, and that, if it is vital, it is an expression of the life of its time and of the structural means at hand. The life of our time has been remoulded in the violent upheaval of the industrial revolution. Our structural materials are concrete and steel and our tools are machines. Our architectural educators have been pitifully slow to recognize these facts, and to re-orient their teaching systems. Even now, though paying lip-service to a widely accepted viewpoint, they frequently cling to their archaic predilections.

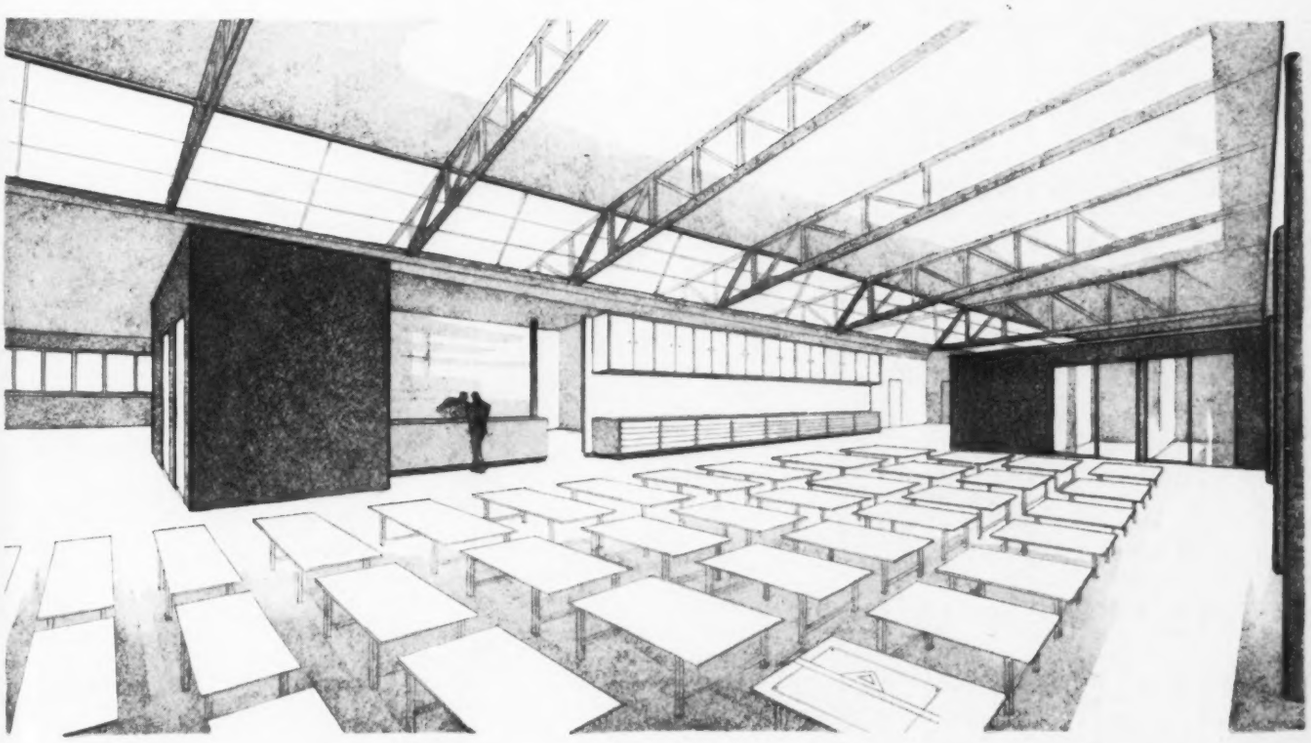
The Architectural Center would expect, by the breadth of its viewpoint, by the quality of its personnel, and by the completeness of its equipment for design, research, experiment and construction, to offer sound and comprehensive training in architecture, engineering, planning, factory practice, construction superintendence, and the other professions concerned in building construction. Basic training in the arts, and in mathematics, physics, chemistry, etc., will be required of student apprentices as prerequisites. Theoretical instruction in planning, structural design, and the strength and nature of materials will be given in the Human Environment Laboratories. Training in the fundamentals of architecture and engineering will be acquired by the apprentices. The students will learn drafting and gain insight in planning and design from work on actual projects in the drafting room. They will take part in building test models and conducting experiments in the Human Environment Laboratories. They will learn essentials of carpentry, metalworking, welding, diemaking, assist in the test assembly of models, and learn to read and make shop drawings in the Shops and Assembly Building. And finally they will participate in actual building operations in the field. The course may be of from four to six years' duration. The student will be awarded a diploma (or certificate of proficiency) upon its completion. As soon as he has acquired sufficient basic training and a degree of proficiency to make his work of value to the Center, his tuition will cease and he will be paid a salary. Since apprentice architects, engineers and technicians who have been particularly successful in their work would make valuable additions to the staff of the Center, many of these will be offered an opportunity to join the organization. Many will go elsewhere into practice, and help thereby to spread the ideals of the Center.

The Aim of the Center: Better Living

Steps to improve our environment cannot be taken without the consent and assistance of the public. Even if this were not the case, it would be useless to provide people with products whose quality they did not appreciate, whose use they did not understand, and which they did not want. Consequently, the Center must seek to make the public aware of the fundamental problems involved in planning homes, communities, and cities, and acquaint it with the measures to be taken to reach a sound solution of these problems.

We will never have an environment fitted for sound and healthful living, and conducive to spiritual growth, until people are brought to see the need for it, and to take the steps necessary to bring it into being. Therefore, they must be guided toward higher ideals in living. Fine things and good living must not be reserved for the elect; they must be made available to everyone. Otherwise we as architects degenerate into purveyors of luxuries to the rich. Good buildings must become the rule, not the rare exception, if we are to have an architecture of value to anyone but collectors or historians. Our future cities must be planned for sane and healthful living, and our present utterly disreputable ones made halfway safe and decent. Otherwise, like trees scored to be felled, their days are numbered.

The Architectural Center hopes to play its role in the creation of a framework for better living.



In the next few pages are shown the various buildings proposed for The Architectural Center, designed by Messrs. Kocher and Dearstyne. Above is the huge main drafting room on the ground floor of the Administration Building. Plan desk and files at left, center offices of Chief Draftsman and Chief Engineer at right. Renderings on this and succeeding pages are by Albert Loecher. Harrison C. Symes aided in the preparation of certain drawings, and the authors gratefully acknowledge assistance from the following: Stanley C. Dearstyne, for helping to prepare manuscript: F. S. Lincoln, in whose studio much of the work was done; Miss Anne Tredick of the Museum of Modern Art, James Johnson Sweeney, Miss Mary W. Chamberlain of the Library of Fine Arts, Columbia University, and José L. Sert, all of whom assisted in assembling photographic material.

The first floor is shared by administrative offices (8-9), public areas, and facilities for design, planning, and study. Public spaces radiate from the entrance lobby (2). In the visitors' waiting room (3) and covered porch (4), near the exhibition hall (6), are changing displays. The lecture hall (5) serves the public and the staff. When the room is not in use the folding screen is drawn aside, leaving the room open to view and thereby augmenting the entrance lobby.

The main Drafting Room (10), Plan Desk (15), and rooms for Specification Writing (21) are grouped in a rough semi-circle. Above offices for the Head Draftsman (11), Chief Engineer (12), and Conference Room (13) is a mezzanine for Special Drafting (14). Immediately adjacent to the Drafting Room is the Library (25). Together with a Main Reading Room (25) and Periodical Reading Room (26), the library has facilities (28) for the projection of films and a Micro-film Reading Room (27). Reserve Stacks and a work space (Basement Space 5) are in the basement. A Building Materials Library (Basement 7) and Storage Space for Models (Basement 8) complete the Library facilities. The Cafeteria (29) on the ground floor is for the use of all workers at the Center as well as visitors.

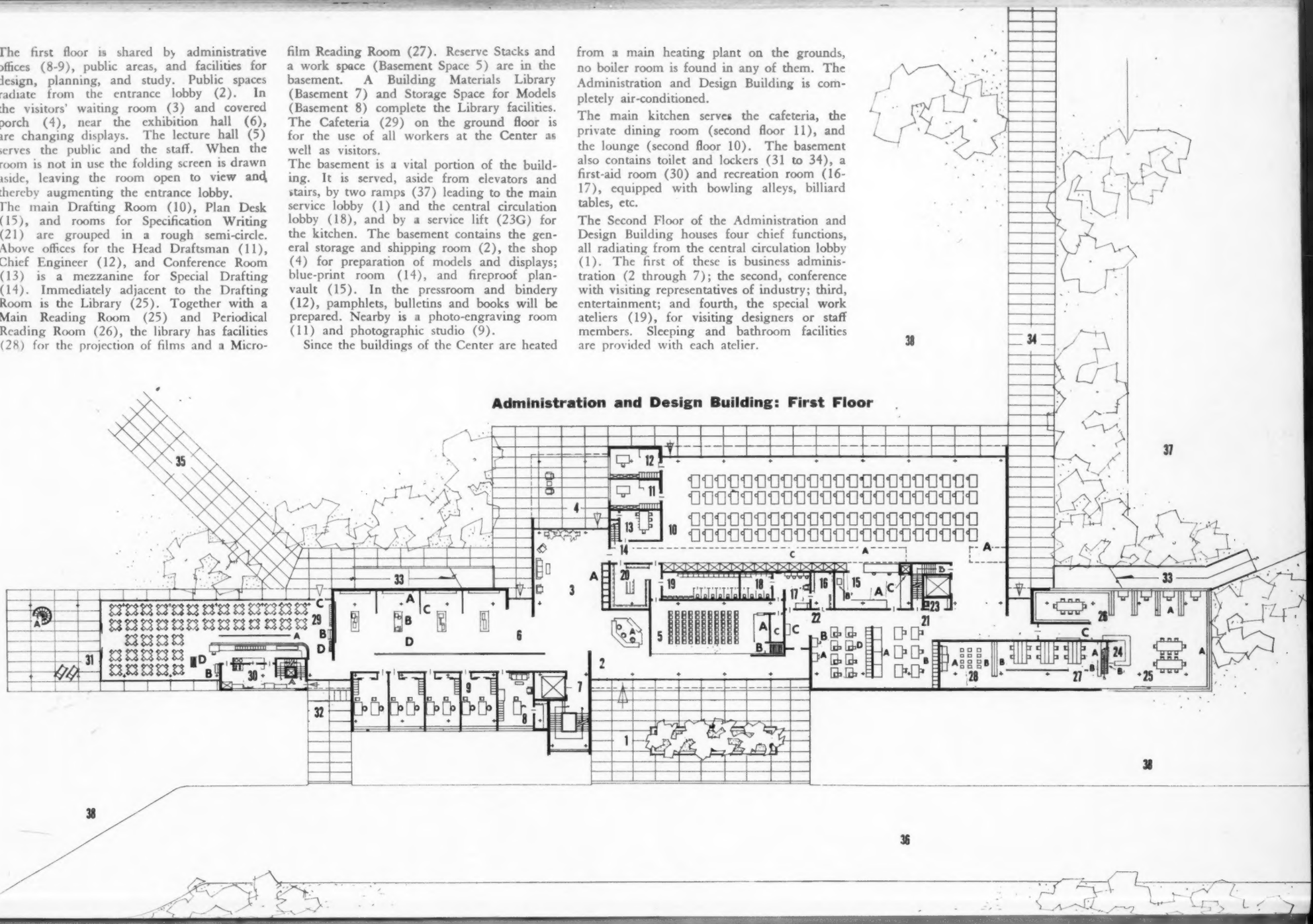
The basement is a vital portion of the building. It is served, aside from elevators and stairs, by two ramps (37) leading to the main service lobby (1) and the central circulation lobby (18), and by a service lift (23G) for the kitchen. The basement contains the general storage and shipping room (2), the shop (4) for preparation of models and displays; blue-print room (14), and fireproof plan-vault (15). In the pressroom and bindery (12), pamphlets, bulletins and books will be prepared. Nearby is a photo-engraving room (11) and photographic studio (9).

Since the buildings of the Center are heated from a main heating plant on the grounds, no boiler room is found in any of them. The Administration and Design Building is completely air-conditioned.

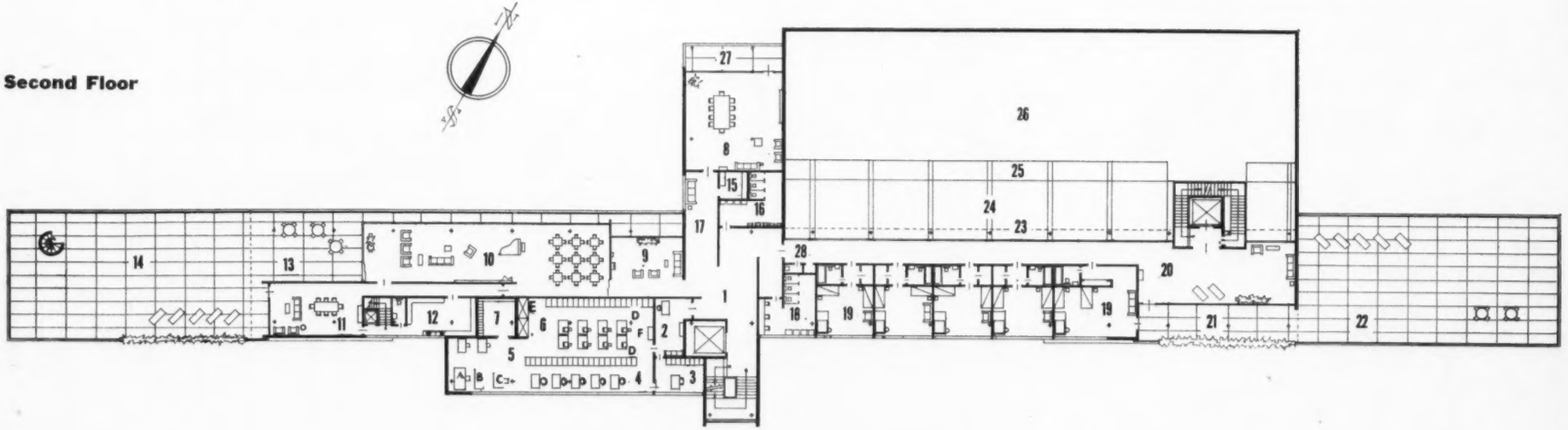
The main kitchen serves the cafeteria, the private dining room (second floor 11), and the lounge (second floor 10). The basement also contains toilet and lockers (31 to 34), a first-aid room (30) and recreation room (16-17), equipped with bowling alleys, billiard tables, etc.

The Second Floor of the Administration and Design Building houses four chief functions, all radiating from the central circulation lobby (1). The first of these is business administration (2 through 7); the second, conference with visiting representatives of industry; third, entertainment; and fourth, the special work ateliers (19), for visiting designers or staff members. Sleeping and bathroom facilities are provided with each atelier.

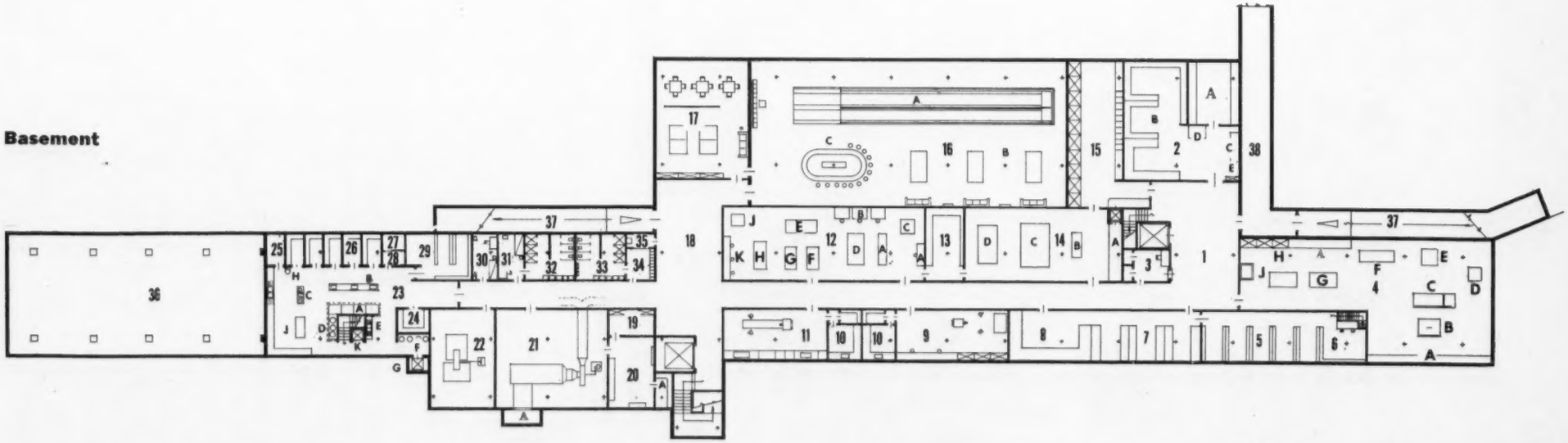
Administration and Design Building: First Floor

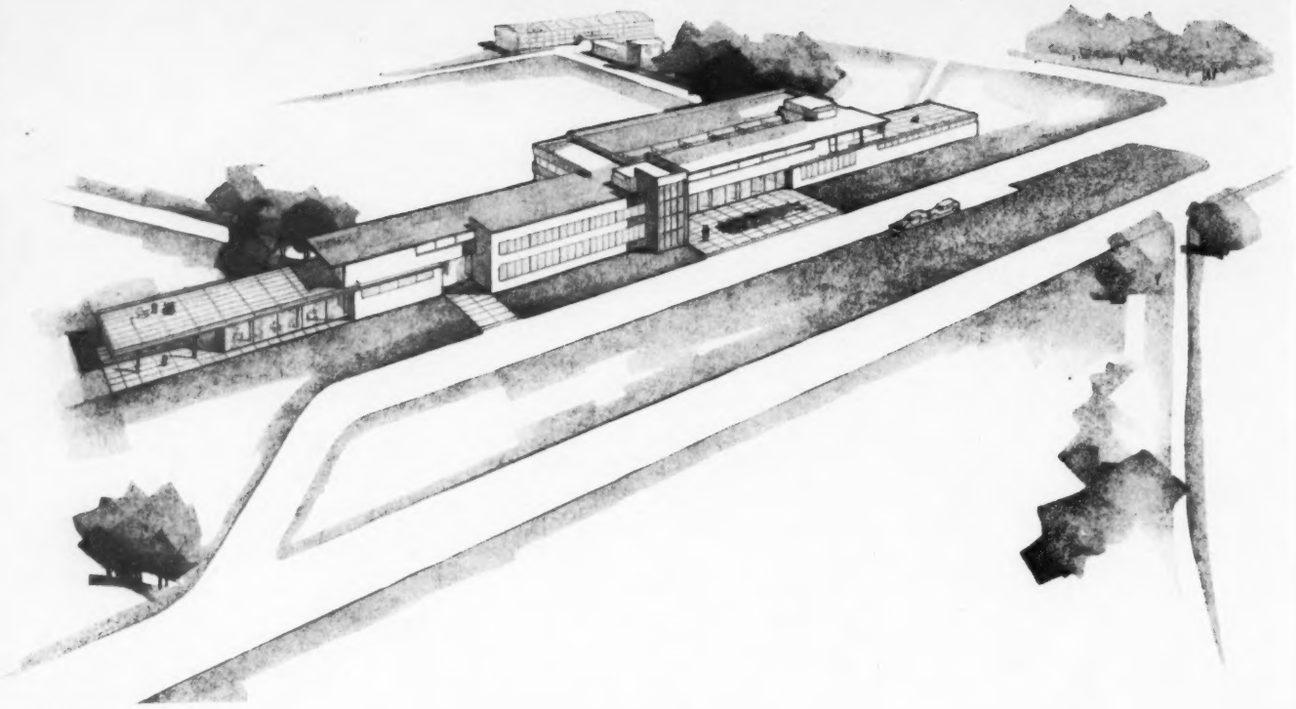


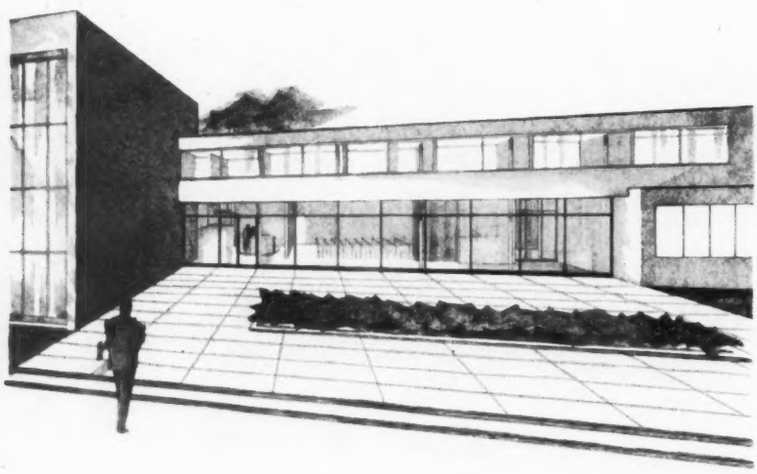
Second Floor



Basement







Administration and Design Building

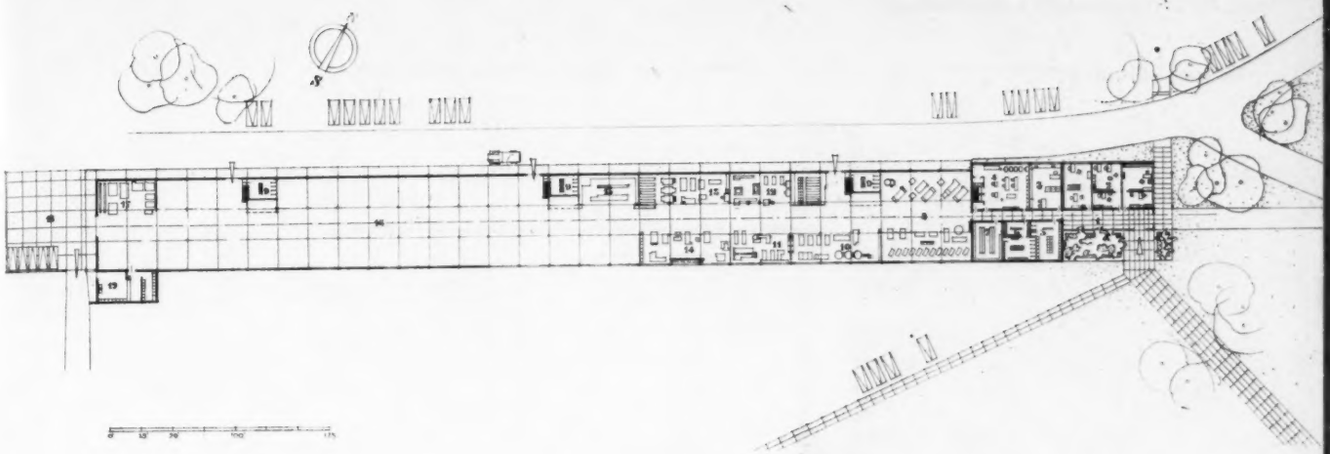
Above are two views of the proposed administrative unit. The birds'-eye perspective, from the entrance front, shows paths and roads leading to all parts of the Architectural Center: at top, to the Human Environment Laboratories; at upper left, to the Shops and Assembly Building; at extreme right, to the experimental settlement. Below the birds'-eye view is a detail of the entrance.

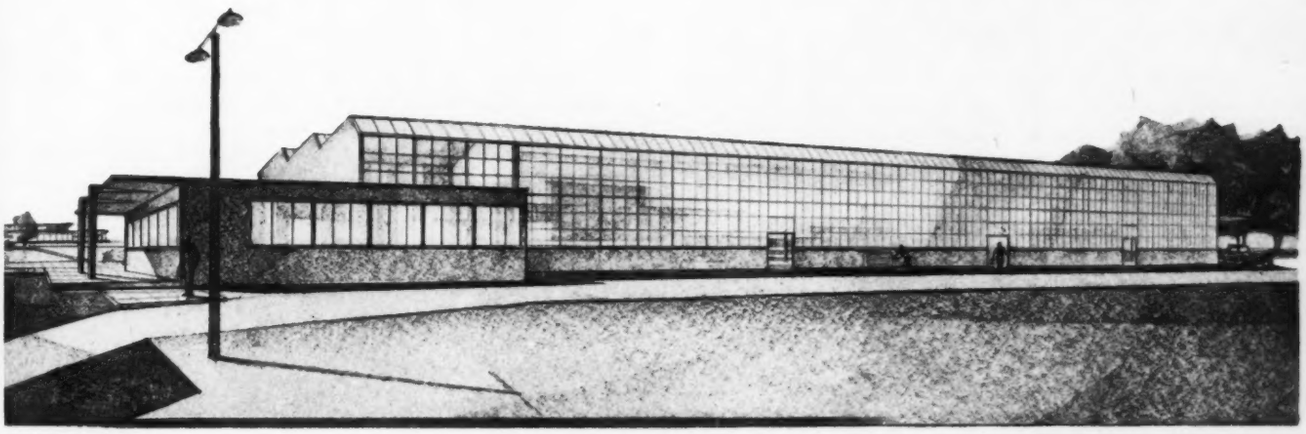
Shops and Assembly Building

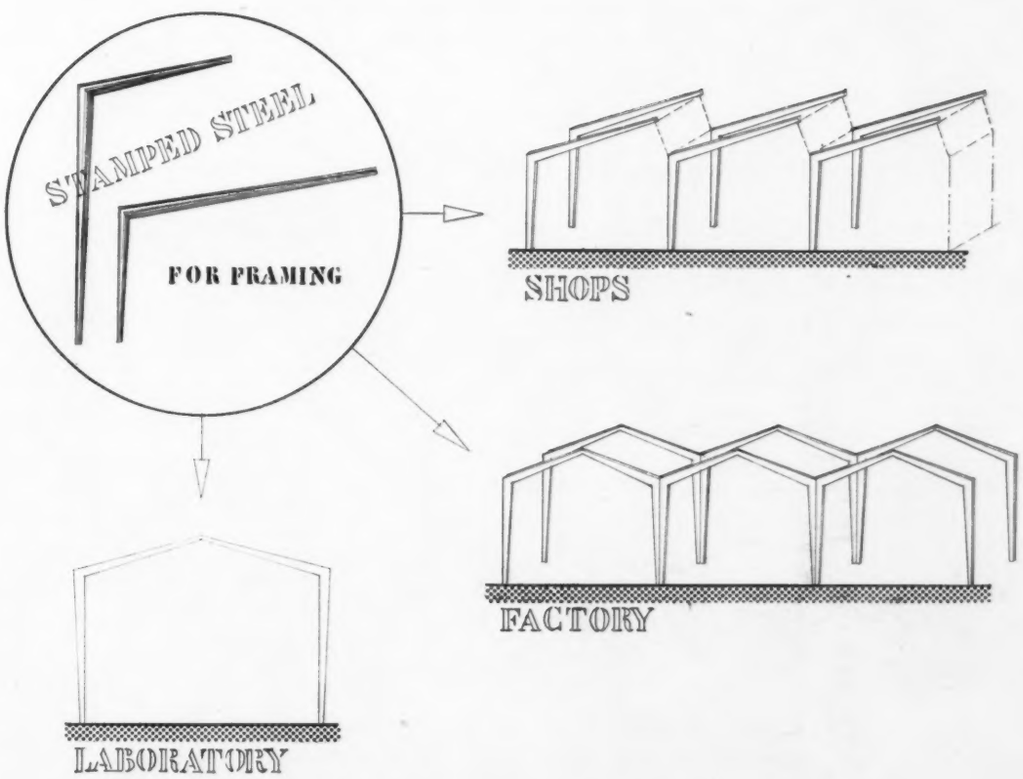
On the facing page is the building in which new developments are put through experimental manufacturing processes. The perspective shows an office wing at the left, shop space at the right. This building serves as the link between creative design and industry. Here the designer's invention is converted to reality. The proposal for a new construction system, for example, would first be examined by shop engineers, checked for practicability, and then produced in model form. This model would be made first as a pattern in wood, and then carried out in metal, plastic or other materials. Its final form, its connectors, finish, manner of assembly in a workable mass production process, would have to be completely investigated in the shops, preparatory to assignment to a steel mill or other plant elsewhere.

Trial fabrication begins in the offices of the plant engineer (4) and proceeds to the shop drafting room where full-size patterns are made. From that point the sequence of operations carries the part through the woodworking shop (8), the metal working (10), fabrication (11), die casting, and stamping shops (12) to trial assembly (13) and final testing (14) preparatory to delivery to industry.

Details at lower right show a suggested method of using stamped steel members for framing the buildings indicated.

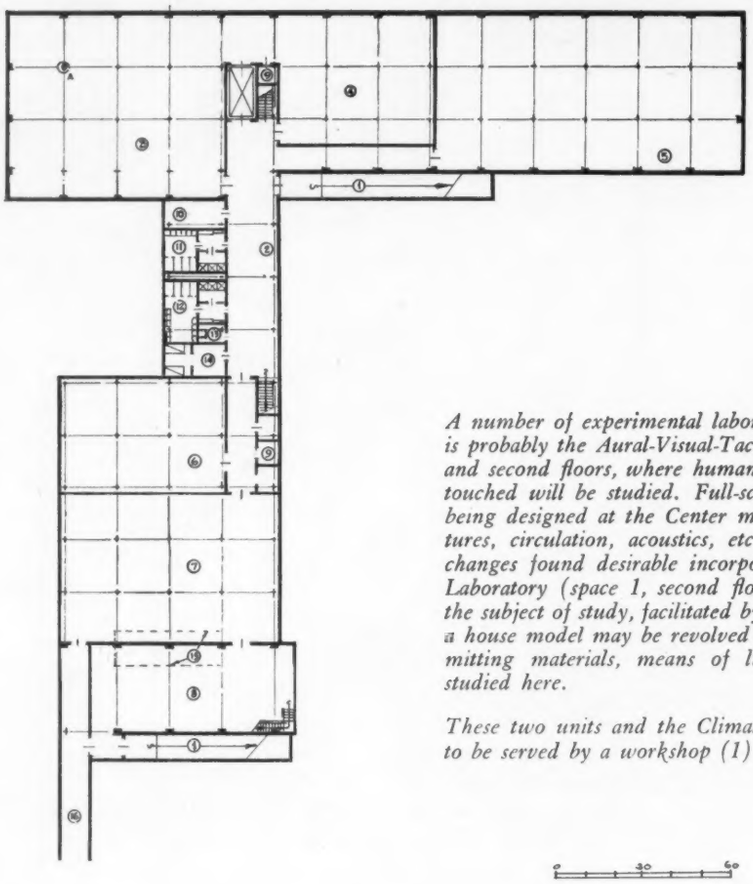





STAMPED STEEL
FOR FRAMING
SHOPS
FACTORY
LABORATORY

Human Environment Laboratories

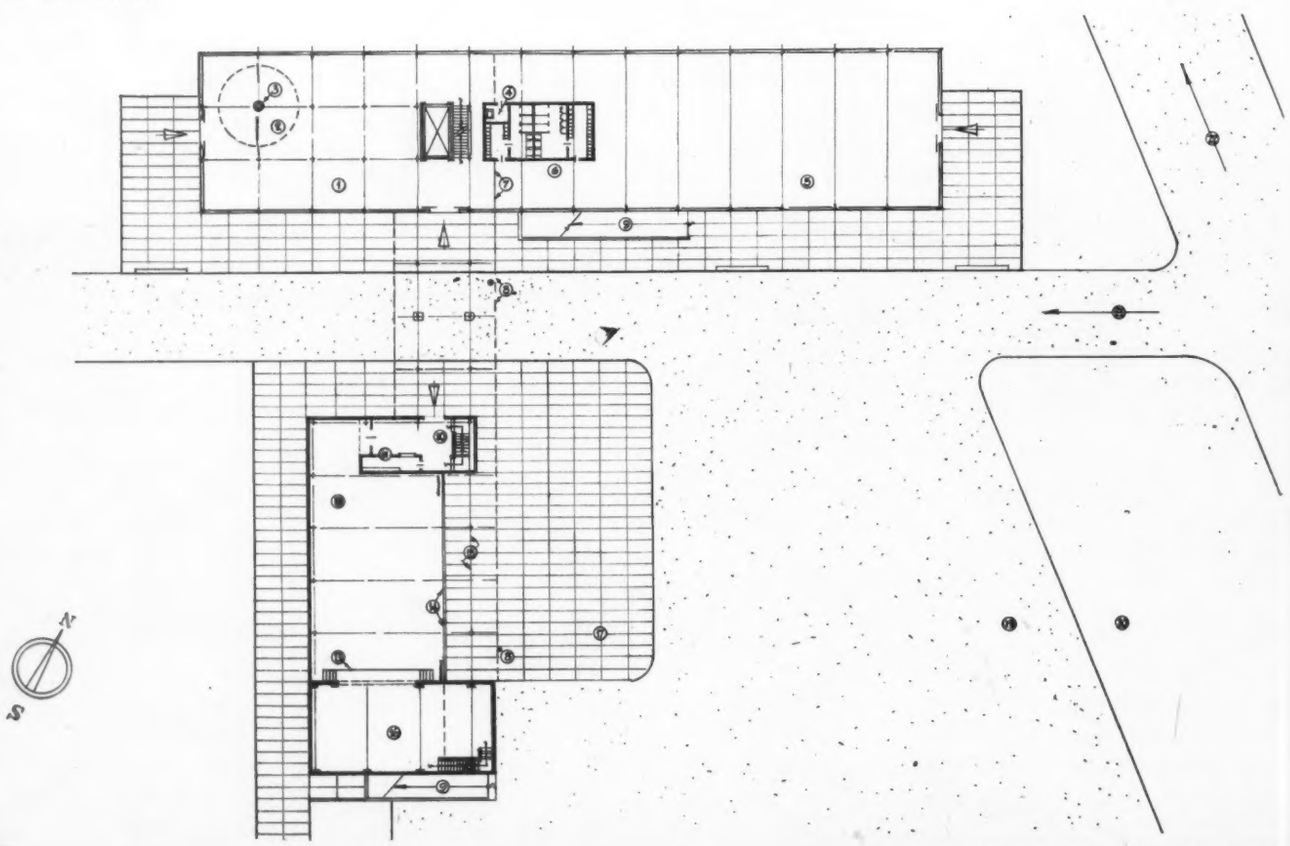
Second Floor

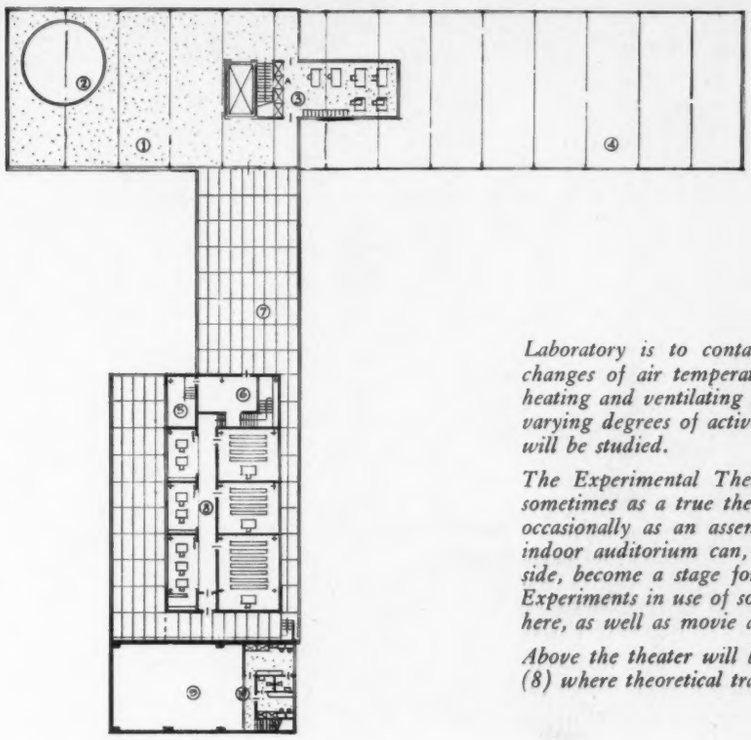


A number of experimental laboratories would be included. Largest is probably the Aural-Visual-Tactile Studies Lab (5) on the ground and second floors, where human reactions to things heard, seen, or touched will be studied. Full-scale models of buildings (or parts) being designed at the Center may be built; color, size, shape, textures, circulation, acoustics, etc., may be tested on people; and changes found desirable incorporated in the design. In the Solar Laboratory (space 1, second floor) building orientation would be the subject of study, facilitated by a "Solar Turntable" (2) on which a house model may be revolved or tilted to any angle. Light-transmitting materials, means of light control, etc., would also be studied here.

These two units and the Climate Laboratory (basement, 6, 7) are to be served by a workshop (1) on the ground floor. The Climate

Ground Floor





Second Floor

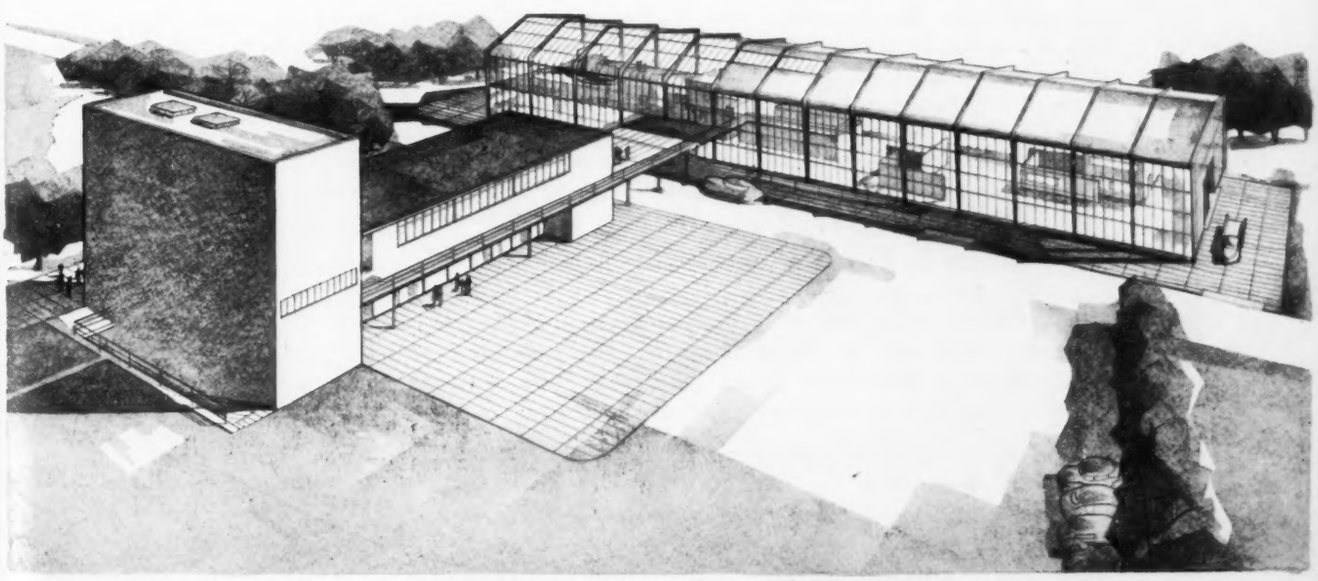
Laboratory is to contain a temperature room, where effects of changes of air temperature, humidity, etc., can be studied, and a heating and ventilating studies laboratory. Human reactions, under varying degrees of activity, and under different climatic conditions, will be studied.

The Experimental Theater (ground floor, 10-16) is to function sometimes as a true theater, sometimes as an acoustical laboratory, occasionally as an assembly hall for the Center's personnel. The indoor auditorium can, by raising the glass wall on the northeast side, become a stage for audiences seated outdoors on the terrace. Experiments in use of sound, radio, and television can be conducted here, as well as movie and still photographic projection.

Above the theater will be a series of classrooms and study cubicles (8) where theoretical training in architecture will be given.

Investigation of the effects of our physical environment, particularly buildings, on human beings is by no means a new thing. Every effort of an architect, city planner—yes, and of a housewife—to render our surroundings more attractive, more satisfying, or even just adequate, involves a weighing of psychological values. But such efforts have often been superficial, uncoordinated. Instead of playing with styles of architecture we ought to study basic human reactions to color, form, sound, spatial relationships and proportions; as well as the effects of heat, cold, moisture-content, and movement of air, sunlight, artificial light—all in order to determine the most favorable environmental conditions. Once we have a better understanding of these factors, we can design buildings fit for human beings. The Architectural Center proposes to undertake studies such as these in its Human Environment Laboratories, and to make the results the basis for building design.

Rendering below shows theater and classroom wing at left, laboratories wing at right.



City Planning Is Older Than The Incas

by G. Jones-Odriozola, Architect

The story of ancient Machupicchu, pre-Inca city in the Peruvian Andes, contains a certain interest for today's architects and planners. Machupicchu's site was consciously selected, its plan deliberately laid out, and it survived in the form its inhabitants chose for approximately six centuries. That we face different problems now is an accepted truism; but, essentially, do we? We call our difficulties economic and social, thereby adding a degree of mystery to the clash of human interests which is a paramount cause of the obsolescence of cities. Mechanical and cultural growth has increased the apparent complexity of the problems; the protection against invasion which the surrounding cliffs gave to Machupicchu, or walls afforded an early medieval city, has to be translated in some parts of the world into three-dimensional protection against invasion by land, sea, or air. In this country we have a creeping decay from within to combat.

Fear of personal attack led to the founding of Machupicchu, and foresight caused it to be planned so it could endure hundreds of years. Fear of an impersonal set of circumstances is now at work in the hearts of some of our many cities' fathers, and some of us are trying to awaken a need for foresight. The pre-Inca people, known as Quechuas, who founded the ancient Andean city were few, and though highly civilized, unmechanical. They chose to live in isolation. We Americans are a nation proud and strong, and mechanically so developed that what we do in a single city intimately concerns not only that city's environs, but also the entire nation.

The Quechuas went one way and we must go another. However, just as they succeeded in working out their salvation, so can we; but the pressure is greater upon us here in the United States of America, because our industrial development has brought with it a tremendously rapid rate of obsolescence. It is also harder to comprehend. The Quechuas had to found and plan Machupicchu or perish; we, if we don't plan, stand to lose a little money and the much greater concept of comfort and joy in life as universal rights. —*The Editors*

Sr. Jones, an Uruguayan architect, has traveled extensively in South America and Europe, is City Planner of the city of Quito, in Ecuador, and is at present studying professional practice in the United States. He is here under the auspices of the Committee for Inter-American Intellectual and Artistic Relations, an agency of the Office of the Coordinator of Inter-American Affairs.

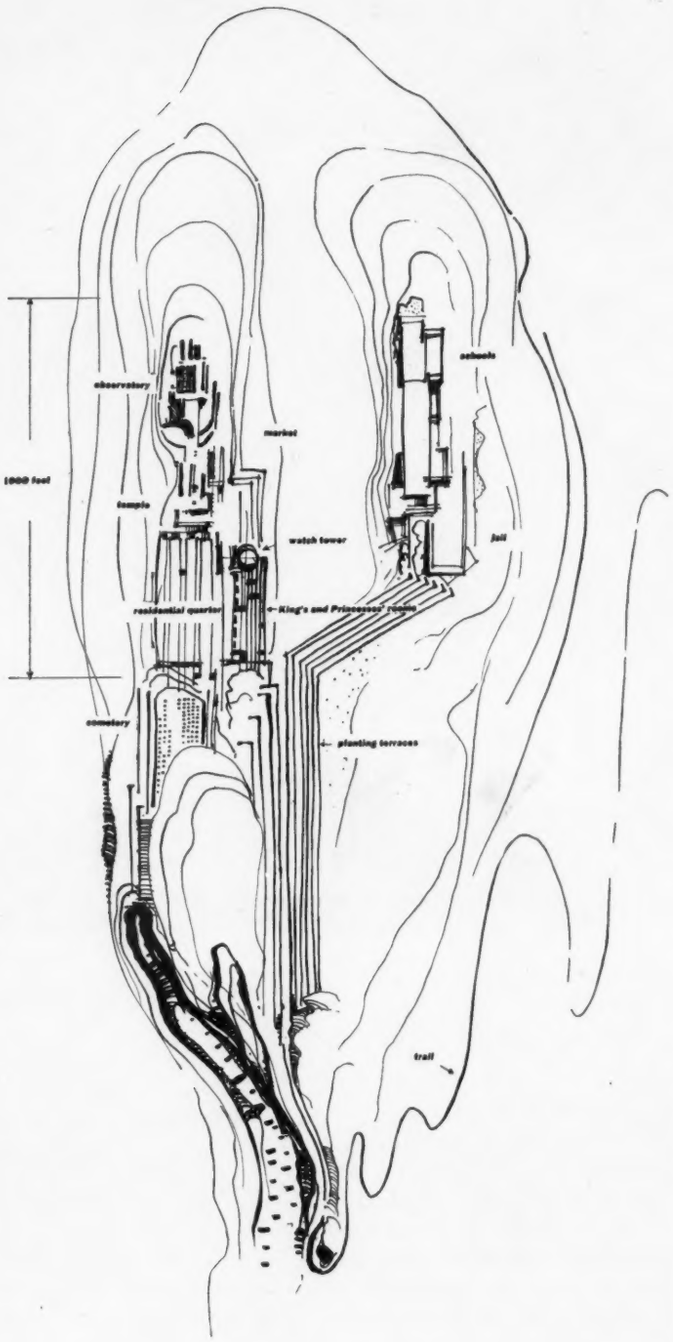
Sr. Jones reached Machupicchu from El Cuzco, Peru, by train, bus and muleback. But the Yale University party under Prof. Hiram Bingham, who discovered the ruins in 1911, took many months to hack its way through jungles, and had to overcome the fears of superstitious native guides en route. Across page, view from temple window; school in foreground.

El Cuzco, in Peru's interior, was an Inca capital. Spanish invaders overran it early in the continent's recorded history, but it remains a sacred city, the center of a series of Inca and pre-Inca ruins: forts, baths, temple and judgment seat are marked by Saccsaihuamán, Pucara, Tampu Machchai, and Kcencco. About 75 miles north of El Cuzco are the ruins of Machupicchu, one of the most ancient cities of the hemisphere, nearly ten thousand feet above sea level.

The country becomes ever more rugged as the train leaves El Cuzco behind. From the Machupicchu station a bus rocks three miles to the San Miguel bridge over the Vilcanota River. From there, the trip has to be made on mules, up a tortuous trail. The isolated summit, with bottomless ravines on all sides, is surrounded by the Andes—wild country, a sea of mountains topped with lazy clouds. The Vilcanota River, far below, has become a silver line from which arises a faint sound.

Why was the city founded in so isolated a spot? Out of legend and bits of evidence left by its founders, a story something like this is pieced together: Toward the fifth century the Quechua Empire on the Pacific coast was invaded by barbarians who defeated its forces, razed its camps and cities, and enslaved its citizens. A small band of Quechuas escaped and fled to the mountainous interior, seeking always the most intricate passes, the places where their tracks would be least noticed. They came upon a watercourse, and followed it while it grew from a trickle to a rushing torrent. It must have been a horrible trip for the band of evacuées, with fear always at their heels, pushing them through country which even they had believed impenetrable. They left their dead along the way.

In legend it is told that one night, after stumbling in darkness, guided only by the river's noise, they fell asleep exhausted. At dawn they awoke and beheld a single peak, isolated from the surrounding mountains by deep gorges. How they bridged the 80-foot wide torrential river we shall probably never know; but the remaining handful of Indians ascended the 3,300-foot walls and conquered Machupicchu. The city they founded endured from the fifth to the eleventh century A.D., always vigilant, and attained a remarkable degree of civilization and prosperity.



Photographs at left show, top to bottom, the Vilcanota River and San Miguel Bridge as seen from Machupicchu; view to the east, from a temple window, with the school in the foreground; typical Quechua masonry. Across the page is the city as seen from the cemetery, with the school and prison on the right of the public square, and on the left, the watch tower and observatory. In the background is Huainapicchu. Terraces at the right (not visible) retained soil under cultivation. Sketch plan above, and all photographs, are by the author.

Later, they conquered another peak, slightly higher, on whose summit they built an observatory from which they studied the heavens (astronomy played a part in their religion) and where they could keep watch. Machupicchu means *Old Peak;* Huainapicchu, *New Peak*. Communication between them was maintained by drums and lights.

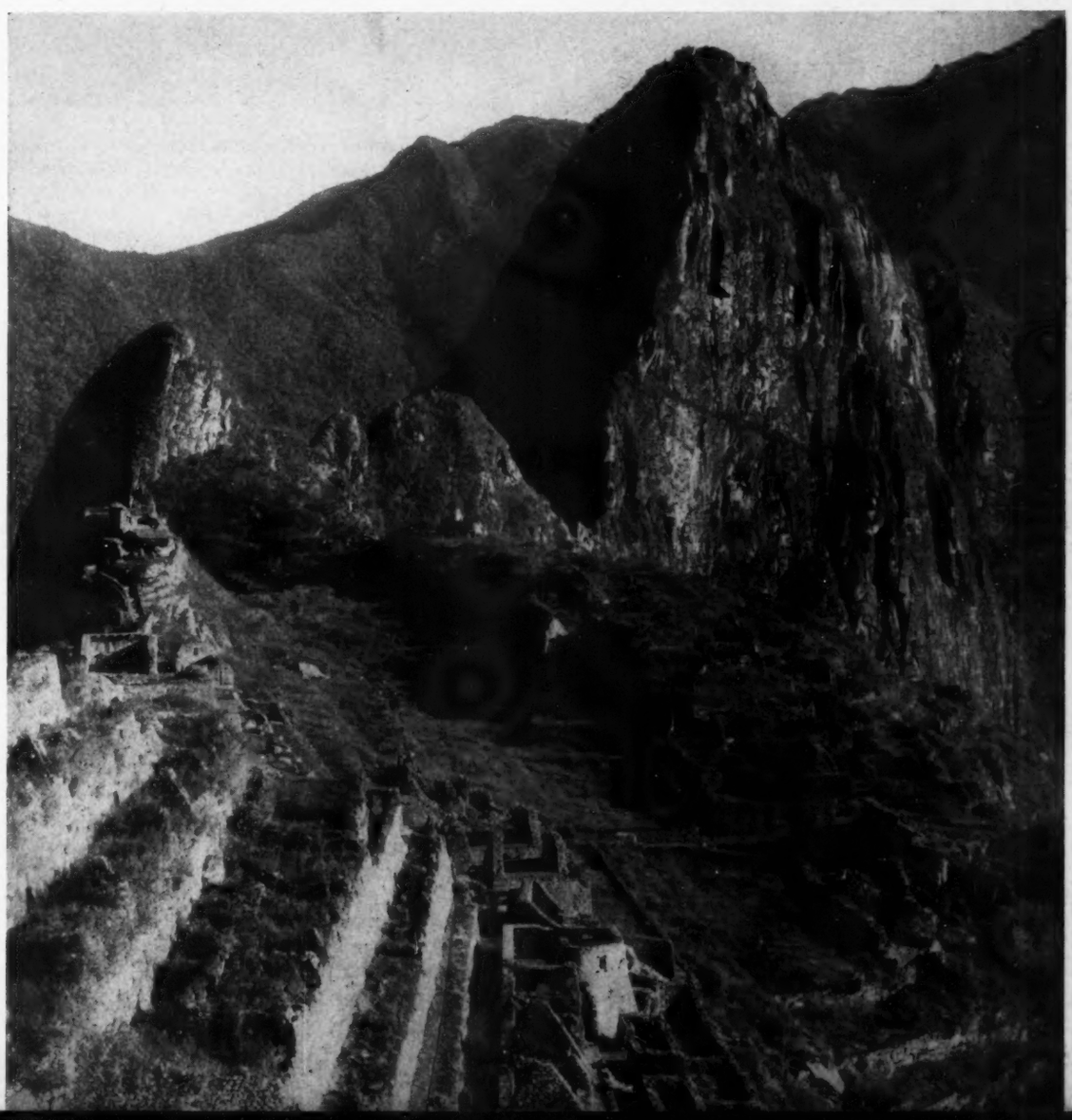
At about the year 1000 A.D. some natural cataclysm—possibly a seismic disturbance—not only cut off the city's water supply, but also caused another case of collective terror. The city built at so much sacrifice was abandoned.

Man disappeared from Machupicchu. Weeds strove to cover the city's stones. When Professor Bingham rediscovered it, much digging had to be done before the outlines of its public places and its houses could be discerned. Eventually they were laid bare: the large square at the top of the trail, with the terraced areas where the Quechuas grew their crops and the watch tower at one side. Farther on are the ruler's quarters with rooms for the chief and his family. The halls of the temple rise one above the other until, by a fine stone staircase, close to the flower-bordered steps which descend the almost vertical rock, one can climb to the observatory.

Behind this group of structures are the narrow streets on which the populace lived. Across the square are the prison, the school of the Nustas (Priestesses of the Sun), and schools for boys and girls. At one side of the entrance road is the cemetery. All the parts are logically disposed.

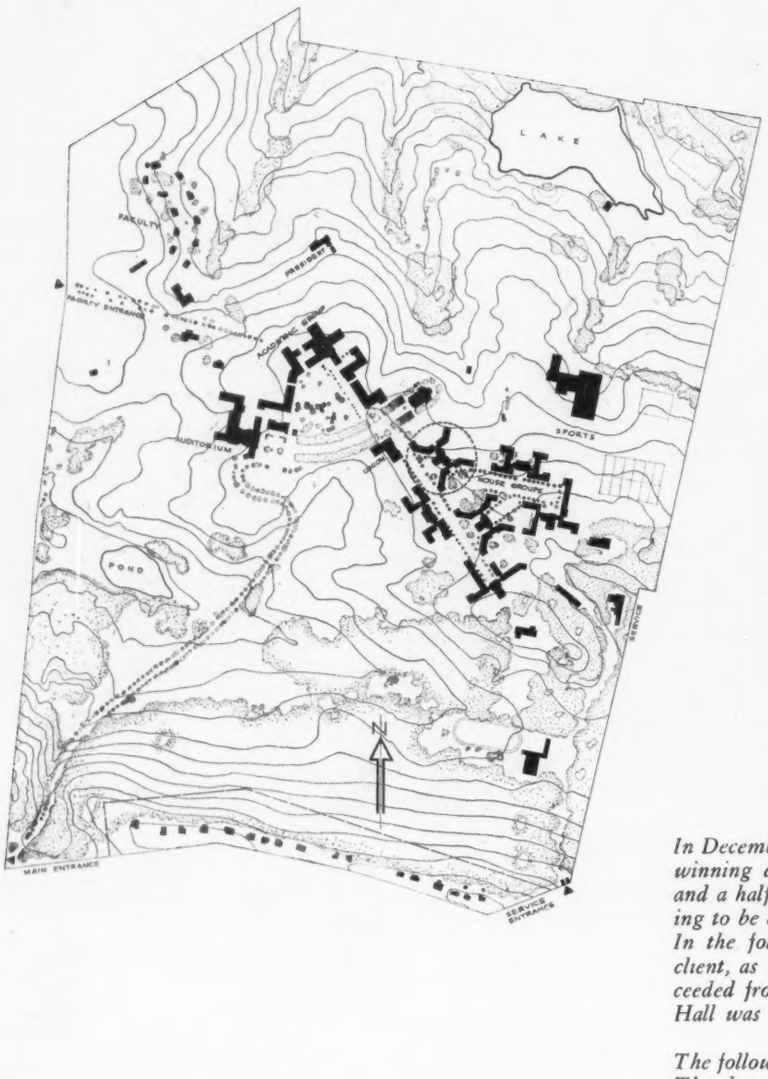
Long before Spaniards, or even Incas, built their cities, an American people had thus built themselves a city designed to further the common good. In the minds of the Quechuas, the collective need outweighed private interest. Today our countries have constitutions which govern the relationships of men. Can we devise planning codes, based on investigation, experience, and study, to govern the relationships of planning elements—urban areas and countryside, buildings and free space, multiple dwellings and private houses, public and private buildings, circulation, and all the other elements—all organized so each can fulfill its function most perfectly? In our preoccupation with the shape of the postwar world let us not be concerned exclusively with the individual and his activity in production and trade. Let us pay some heed to the centers, urban and rural, where this activity will develop.

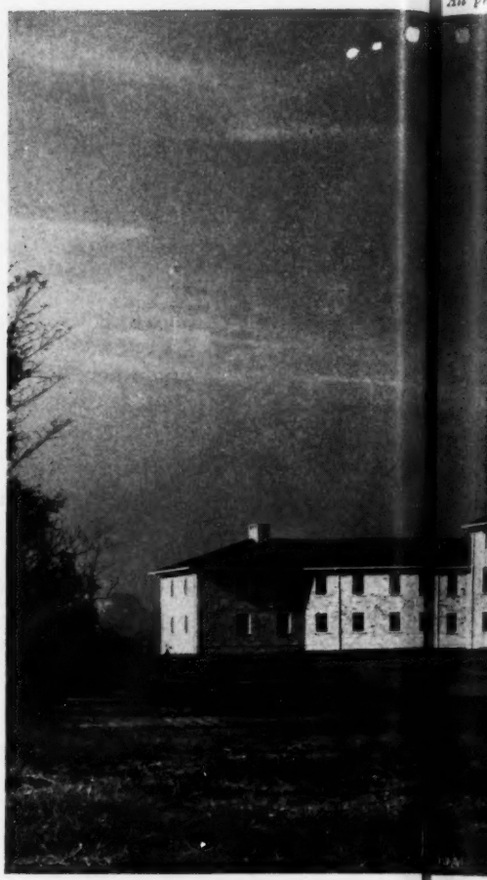
In Machupicchu we have a concrete example of municipal organization and planning, revealed to modern planners by the archaeologist. That it is a ruin is not due to any organic deficiency, but to an external phenomenon. In its six hundred years succeeding generations left their traces on the city; the process of improvement was felt there as it is in our day. Yet nothing broke the continuity of their civilization, least of all their amazingly vigorous construction, as expressed in the temple or humbler buildings, staircases or retaining walls. The clarity with which we can see that way of life is testimony to the foresight of its founders. Machupicchu was a gigantic achievement.



Mary Fisher Hall, Goucher College, Baltimore County, Md.

Moore and Hutchins, Architects





In December, 1938, Pencil Points *published Moore and Hutchins' winning design in the Goucher College competition. Now, four and a half years later,* New Pencil Points *presents the first building to be designed by that firm and built on the college's new site. In the following pages we demonstrate how the architects and client, as well as the many specialists engaged in the work, proceeded from the time the competition was won until Mary Fisher Hall was built.*

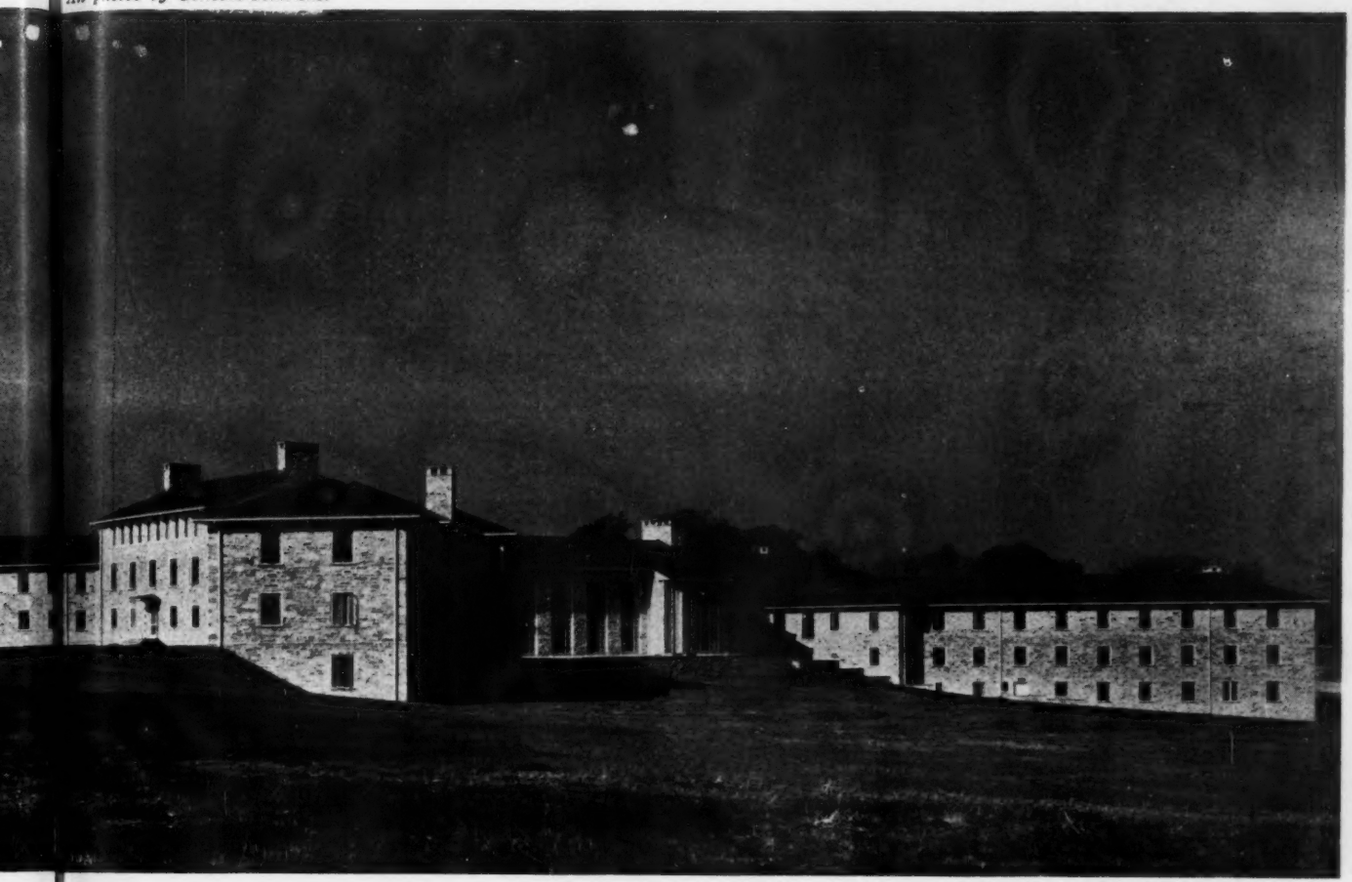
The following were consultants and designers: Structural Engineer, Theodore Barbato; Mechanical Engineer, Henry Adams, Inc.; Roads and Utilities Engineer, George William Stephens, Jr., and Associates; Landscape Architect, H. Clay Primrose; General Contractor, Harry A. Hudgins Co.; Interiors and Furnishings, Moore and Hutchins (Mrs. Montgomery Wright, Asst.). Several awards for excellence of craftsmanship were made by the Baltimore Building Congress and Exchange. J. G. Arthurs of James Cullen, Inc., tile roofing; M. Hubert of Acme Tile Co., tile and marble; R. Meyers of Harry A. Hudgins Co., finish carpentry; Paul Fiebiger, Jr. of P. A. Fiebiger Co., ironwork.

Originally the Goucher Board of Trustees had contemplated commissioning the winners of its 1938 competition to restudy the entire campus plan; but so successfully did Moore and Hutchins competition drawings interpret the college's needs that the plan they developed was adopted as definitive.

First to be built, however, was not the library, which had been studied in detail in the competition, but a residence hall. Goucher College wanted to take advantage of the better facilities which would become available by moving as many resident students as possible from its crowded, antiquated halls in Baltimore to the new campus. At present the difficulty of traveling from the rural campus to city classes, caused by the war, is overcome by holding some seminars and classes in the common rooms of Mary Fisher

Mary Fisher Hall, first building on Goucher's new campus (and probably the only one for the duration) was completed in 1942. It is a residence hall for 180 students—approximately two-thirds of the present resident enrollment. The college has a total enrollment of approximately 600.

All photos by Gottscho-Schleisner



Hall; those who attend classes in Baltimore are taken by station wagon and bus a mile and a half to Towson, the nearest municipality; from there a trolley runs to Baltimore. In spite of this minor difficulty the girls are enthusiastic about Mary Fisher, and prefer it to accommodations in town.

The College had hoped to be able to proceed with another building like the one just completed, to house all resident girls. Meanwhile it has begun to sell some of its antiquated city properties. Since Mary Fisher Hall is isolated, it has to contain all the services and departments needed for efficient operation. Thus, in addition to students' rooms, drawing room, parlors, recreation room, sun deck and other common rooms, it includes an office; Director's and faculty members' apartments; dining room with kitchen, storage space, and dietitian's suite; heating plant; engineer's apartment; maid's room; 5-bed infirmary with doctor's office, nurse's suite, 3 sick rooms and treatment room; library; post office; store; and guest suite.

To assemble the list of requirements necessitated much work; the faculty planning committee made preliminary studies, which the architects translated into workable schemes. It was during this phase of the proceedings that Moore and Hutchins were commissioned to make the study of residence halls in women's colleges which is presented as a comparative analysis on page 59. As far as is known, this is the most comprehensive study made of this problem to date.

Conferences with the trustees and the planning committee continued through the design and construction phases. Preliminary discussions led to the following decisions: the building should not be too high; should be domestic in character; and should house 180 girls (taken as a minimum figure for efficient operation) divided into 4 groups of about 45 girls, each with its resident faculty members and common room. This size of group was held to be best for maintaining a sense of group identity, while at the same time affording a quite wide choice in social contacts.

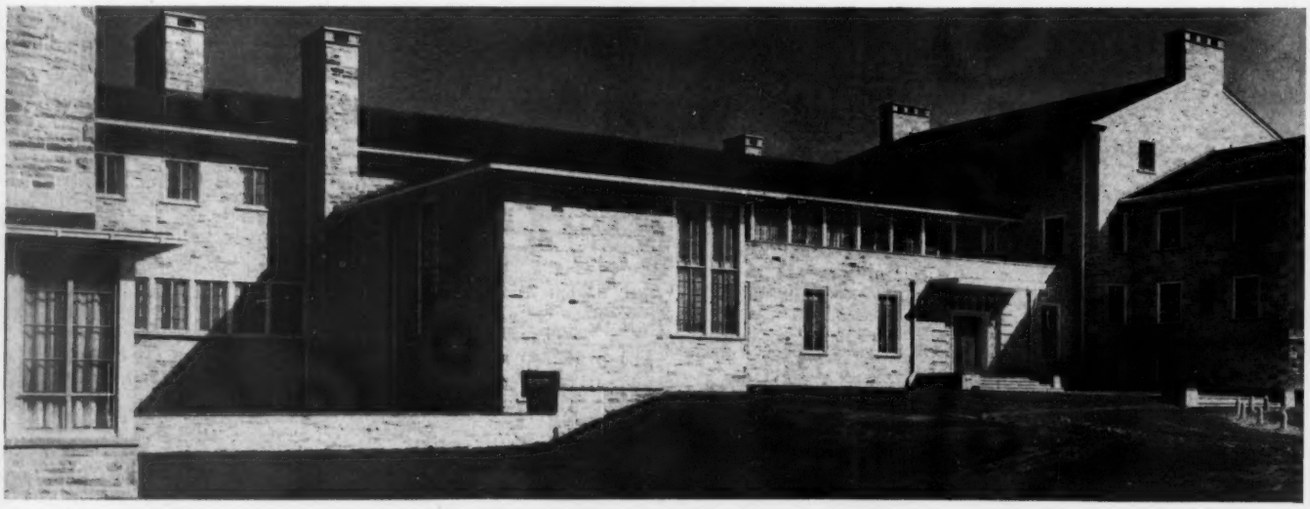
Study of individual student's room layouts, including size, possible furniture arrangements, closets, etc., was fundamental. These are shown in more detail on page 58. Rooms are arranged with some variety.

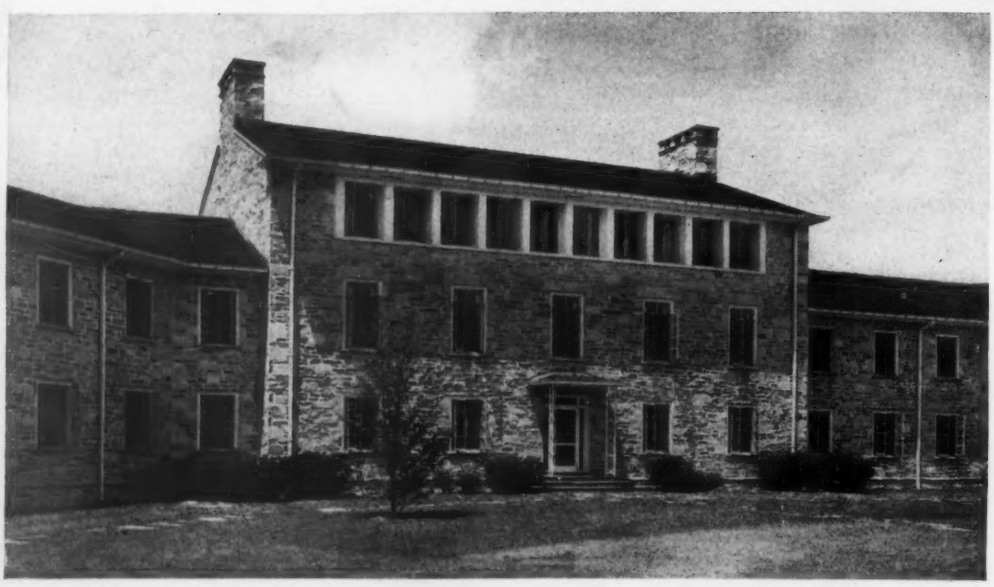
The next step was to study the residence group of which Mary Fisher Hall is a part; unfortunately, space does not permit showing these studies. After satisfactory general decisions had been reached concerning this entire quadrangle, studies of the Hall itself were undertaken. As finally planned, the building was located exactly where a closely similar unit had been indicated on the competition plan (see circled building on plot plan at left). The present entrance drive is somewhat circuitous because the service road is being used until the main entrance drive from Towson can be built.

The design results from the nature of the program. This required many individual windows in comparatively large wall surfaces; large glass areas, or groups of small windows, have been used to prevent repetition of this motif from becoming monotonous. Investigation revealed that local stone had been used in building for a hundred years or so; it is a gneiss of cream color, appropriately feminine in quality. Because the quarry was close by, it was possible to lay up a 16-in. wall of run-of-quarry stone more cheaply than a 12-in. brick wall. Color of mortar was carefully selected to enhance the stone's texture and color. The roof is dark red shingle tile, textured to prevent reflection of the blue of the sky.

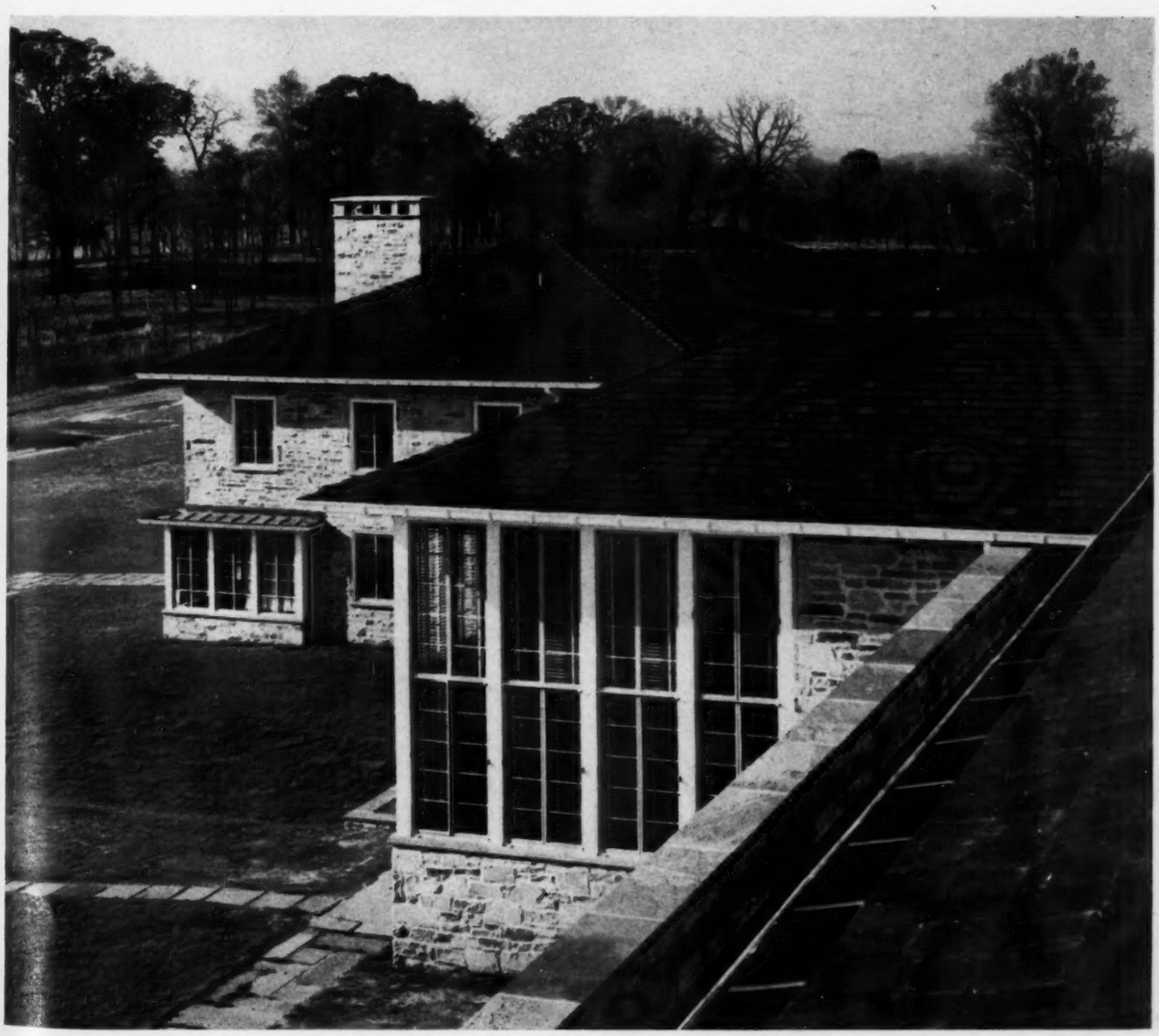
That the Goucher College Board of Trustees was well pleased with Mary Fisher Hall is evidenced by a resolution adopted on October 17, 1942, in which they expressed to John C. B. Moore and Robert S. Hutchins " . . . thanks and appreciation of their outstanding achievement in designing, supervising the construction of, and furnishing that Hall."

Above, southwest face of the central block, main entrance at right, sundeck above. Center, general view from the southwest; note large windows in Drawing Room wing (center) and West Common Room (left.) Bottom, South House, with secondary entrance; this is, in appearance at least, the tallest block. The Hall follows the site's rolling contours, with several changes of level, so that although the highest floor is 5 stories above the lowest, no single wing is more than 2 stories high, with a partial third.

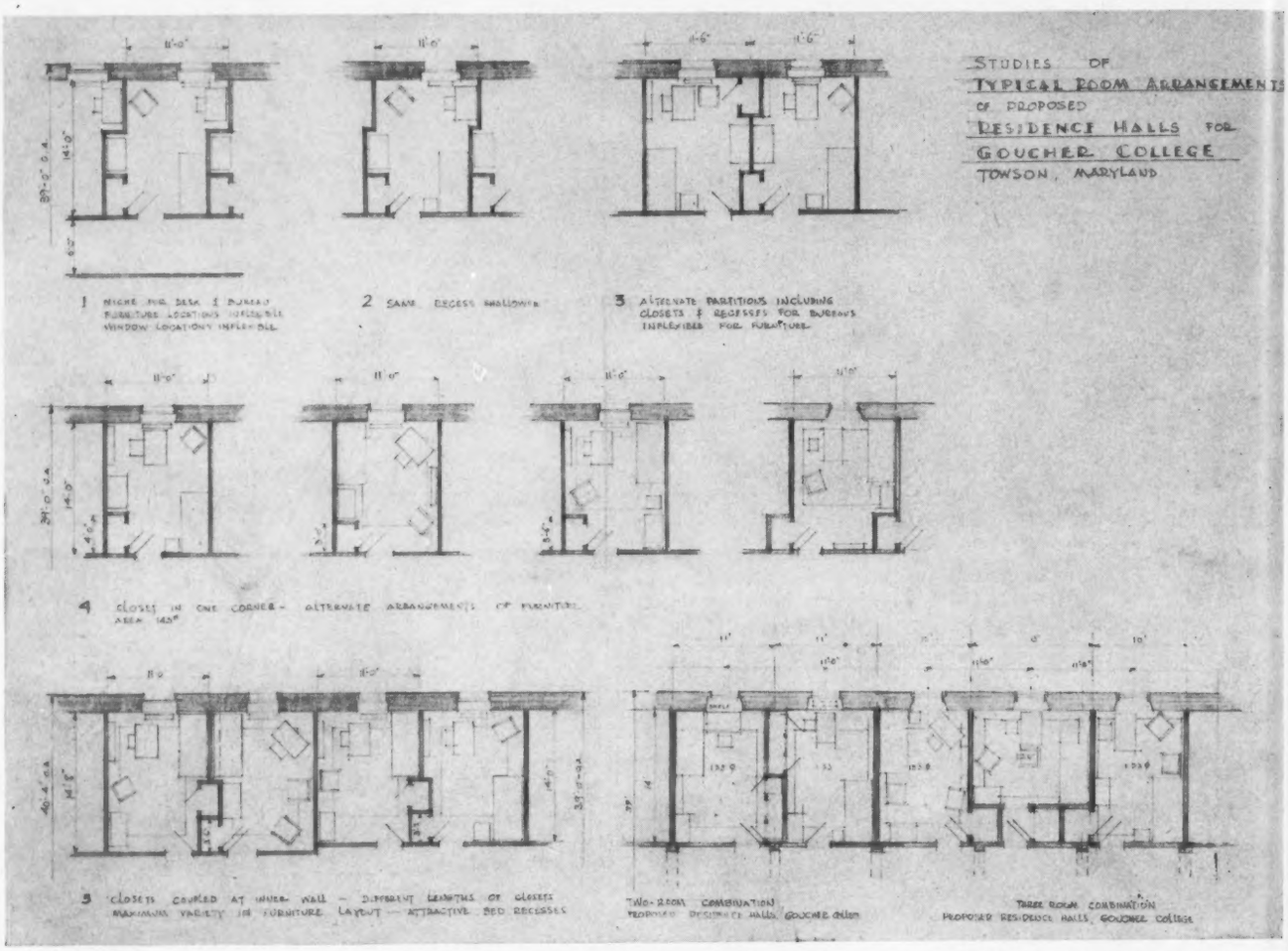


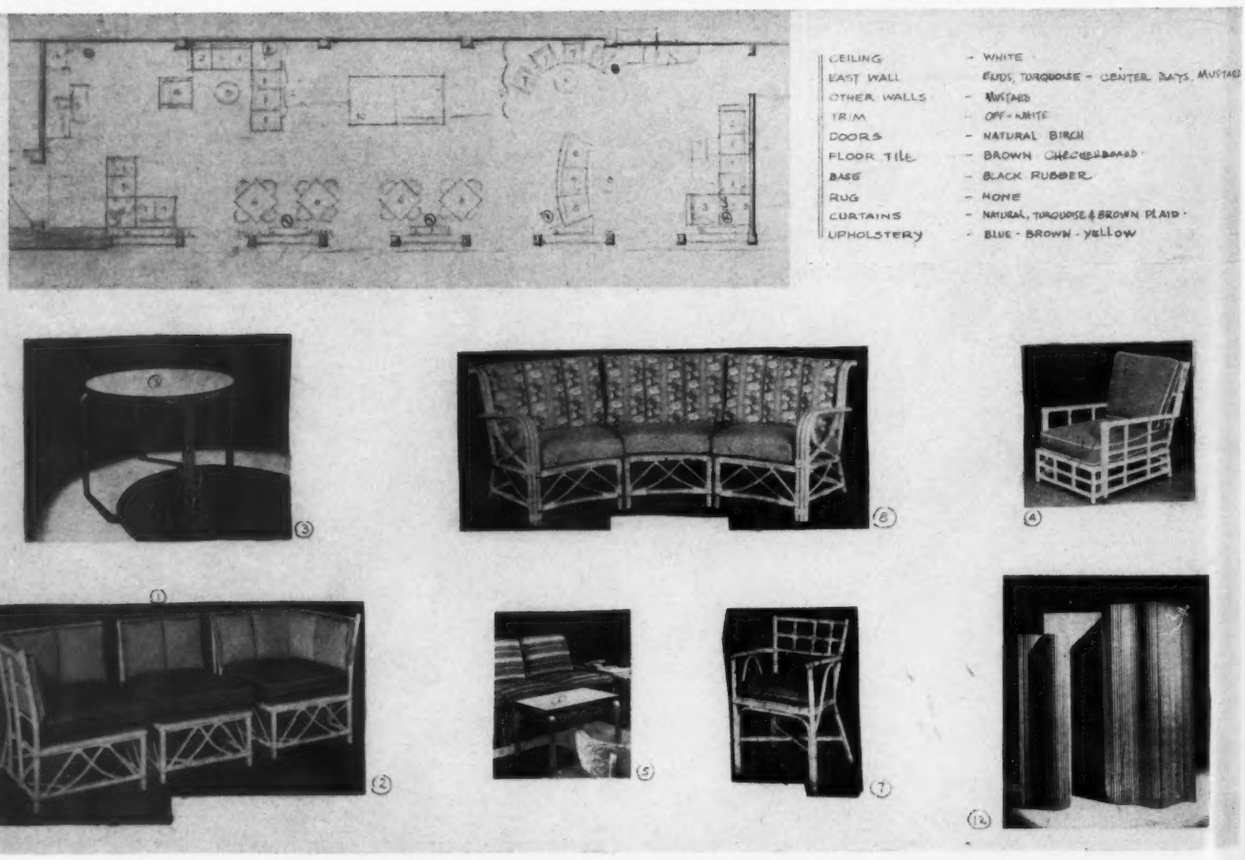


Above, Terrace Garden, at the rear (northeast) of the central block, is overlooked by the Dining Room. Below, view of entrance side from top story of South House. The building is divided into East, West, North, and South Houses, each of which accommodates a unit of approximately 45 girls and a faculty member. See plans on pages 60, 61.



Below are reproduced a sheet of detailed studies of a typical room, and the mount on which studies of furnishings for the Recreation Room were presented to the planning committee. An area of 125 sq. feet was determined upon for the average student's room. The typical single room has a single window which provides sufficient light and permits varied furniture arrangements. Doors and closets were also located so they would not restrict furniture layouts. Some double rooms are provided. Most popular is the "double-single," two single rooms with a common entry. Studies of furnishings were made for all principal rooms, and presented, with color and material samples, for the committee's consideration.


STUDIES OF
TYPICAL ROOM ARRANGEMENTS
OF PROPOSED
RESIDENCE HALLS FOR
GOUCHER COLLEGE
TOWSON, MARYLAND
1 NICHE FOR DESK & BUREAU FURNITURE LOCATIONS INFLEXIBLE WINDOW LOCATION INFLEXIBLE
2 SAME RECESS SHALLOWER
3 ALTERNATE PARTITIONS INCLUDING CLOSETS & RECESSES FOR BUREAUS INFLEXIBLE FOR FURNITURE
4 CLOSET IN ONE CORNER - ALTERNATE ARRANGEMENTS OF FURNITURE
5 CLOSETS COUPLED AT INNER WALL - DIFFERENT LENGTHS OF CLOSETS MAXIMUM VARIETY IN FURNITURE LAYOUT - ATTRACTIVE BED RECESSES
TWO-ROOM COMBINATION
PROPOSED RESIDENCE HALLS, GOUCHER COLLEGE
THREE ROOM COMBINATION
PROPOSED RESIDENCE HALLS, GOUCHER COLLEGE


CEILING - WHITE
EAST WALL - FLUDS, TURQUOISE - CENTER BAYS, MUSTARD
OTHER WALLS - MUSTARD
TRIM - OFF-WHITE
DOORS - NATURAL BIRCH
FLOOR TILE - BROWN CHECKERBOARD
BASE - BLACK RUBBER
RUG - NONE
CURTAINS - NATURAL, TURQUOISE & BROWN PLAID
UPHOLSTERY - BLUE - BROWN - YELLOW

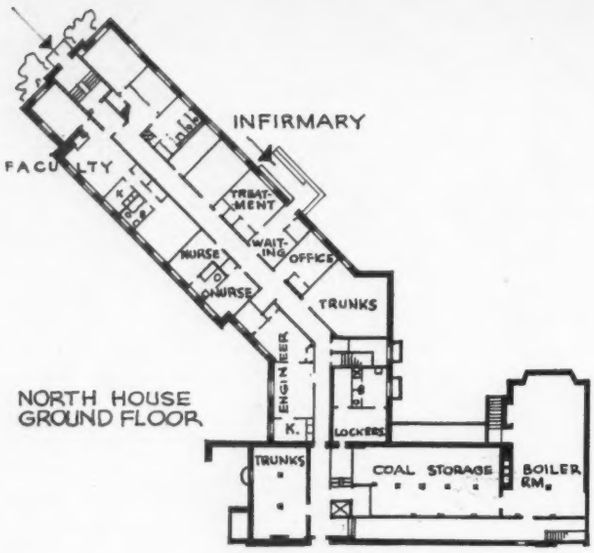
The College authorized the architects to visit several women's schools, examine their recent residence halls in detail, and report findings. Particular inquiry was made into the sizes of groups found most conducive to stimulating relationships in study and social life, and into the number most effieiently housed and fed as a unit—not necessarily identical. Methods of administration were also studied. This information established the basis for the design of a building having four wings and a central block. The tabulated data is printed with the kind permission of the respective colleges.

COMPARATIVE ANALYSIS—RECENT RESIDENCE HALLS IN WOMEN'S COLLEGES

College	Hall	Date Built	No. Units	Stories	No. Students	Single Rooms	Double Rooms	Dining Halls	Kitchen	Kitchen Location (a)	General Living Rooms	Parlors	Library	Common Rooms	Rec'n Rooms	Heating Plant	Total Cost $	Cost per Student—$
Bennington	Franklin	1936	1	2	20	All	Few	0	0	—	1	0	0	0	0	Individual	—	—
Bryn Mawr	Rhoads	1938	1	2½	114	All (+12 suites)	0	1 (2nd fl.)	1	2nd fl.	1	4	2	0	2	Central	502,500	4,407
Connecticut	Windham	1933	1	4	71	50	4 (+6 suites)	1	1	Adj.	1	1	0	0	1	Central	127,384	1,794
	M. Harkness	1934	1	3½	75	63	6	1	1	Adj.	1	1	1	3 1 (each fl. @ 27 girls)	1	Central	153,896	2,052
	J. Adams	1936	1	4	72	60	7	1 Common		Adj.	2	0	0	3 ea. (1 each fl. @ 26 girls)	1	Central	168,829	2,345
	Freeman	1937	1	4	77	73	2	1 Common		Adj.	2	1	0		1	Central	178,449	2,317
Jackson (Tufts)	Stratton	1927	1	3	43(b)	31	6	1 @ 75	1	Adj.	2	3	0	0	0	Individual	200,000	4,650
Mt. Holyoke	N. Mandelle	1924	1	4	—	—	—	1	1 serving kitchen each	Remote (c)	1	3	0	0	1	Central	513,000	—
	S. Mandelle	1924	1	4	—	—	—	1			1	—	0	0	1	Central		
	N. Rockefeller	1924	1	4	64	34	15	1			1	3	0	0	1	Central	501,000	3,980
	S. Rockefeller	1924	1	4	64	34	15	1			1	—	0	0(d)	1	Central		
	E. Abbey	1939	1	3	63	47	8	1(e)			1	2	0	0	1	Central	173,600	2,755
Radcliffe	Briggs	1925	1	4	79	79	0	1 @ 85 Common		Below (f)	1	2	1	0	0	—	—	—
	Cabot	1937	1	4(g)	72	72	0	1 @ 80 Common		Adj.	1	3	1	4(h)	2	Individual (i)	304,283	4,226
S. Lawrence	Gilbert	1928	1	3	32	32(j)	0	0	0	—	1	0	0	0	0	Central	308,000	2,610
	D. Lawrence	1928	1	3	43	41(j)	1	0	0	—	1	0	0	0	0	Central		
	Titsworth	1928	1	—	43	41(j)	1	0	0	—	1	0	0	0	0	Central		
	MacCracken	1930	1	3	66	46(j)	10	0	0	—	1	0	(k)	0	0	Central	170,000	2,575
Scripps	E. J. Toll	1927	1	2	50	All	—	1(e)		Adj.	1	3	1	5 Loggias	1	Central	206,000	4,120
	G. S. Clarke	1928	1	2	50	All(l)	—	1(e) Common		Adj.	1	2	0	1	0	Central	193,000	3,860
	E. Browning	1929	1	2	50	All(l)	—	1(e) Common		Adj.	1	2	1	0	—	Central	252,437	5,048
	S. M. Dorsey	1930	1	2	50	All(l)	—	1(e) Common		2nd fl.	2	3	0	1	0	Central	180,790	3,616
Simmons	Evans	1938	1	5(m)	73	43	15	0	0	—	1	2	—	3(n)	1	Central	167,000	2,290
Smith	Morrow	1926	1	4	63	All	—	1 Common		Adjacent	2	0	1	0	0	Group Plant	614,000	3,240
	M. Wilson	1926	1	4	63	All	—	1 Common		Adjacent	1	0	0	0	0	Group Plant		
	Gardiner	1926	1	4	63	All	—	1	1	Adj.	2	0	1	Smok'g Rm.	0	Group Plant		
	Wilder	1930	1	3	70	58	6	1	1	Adj.	2	0	0	Smok'g Rm.	1	Group Plant	400,400	3,180
	Comstock	1930	1	3	70	58	6	1	1	Adj.	2	0	0	Smok'g Rm.	1	Group Plant		
	L. Scales	1936	1	3(p)	60	All	—	1 can be combined	1	Adj.	2	3	1	Smok'g Rm.	1	Group Plant	413,500	3,446
	F. King	1936	1	3(p)	60	All	—	1 can be combined	1	Adj.	2	2	1	Smok'g Rm.	1	Group Plant		
Vassar	Cushing	1927	2(q)	4	65 ea.	All	(r)	2(s)	1	Adj.	1 ea.	3 ea.	0	0(d)	0	Central	338,000	2,600
Wellesley	Stone-Davis	1927	2	3½	83 ea.	77	3	2 @ 120(t)	1	Adj.	1 ea.	1 ea.	0	0	0	Central	772,000	4,650
	Munger	1932	1	3+ Basement	115(u)	103	6	1 @ 115(v)	1	—	1	1	1	0	0	Central	322,000	2,800(w)
	Severance	1927	1	3(Av.)+ Basement	140(u)	63	32	1 @ 140(t)	½	Adj.	1	1	0	0	0	Central	595,000	4,250
Wheaton	Kilham & Metcalf	1931-33	2	3	43 ea. (x)	31 ea.	6 ea.	0	0	—	1½ ea.	6 ea.	1	0	1 for both	Central	255,000	3,253
Goucher	M. Fisher (y)	1942	4	2½	180	148	16	1	1	Adj.	1	3	1	4(y)	1 gen'l	Individual	619,698(y)	3,442

NOTES:

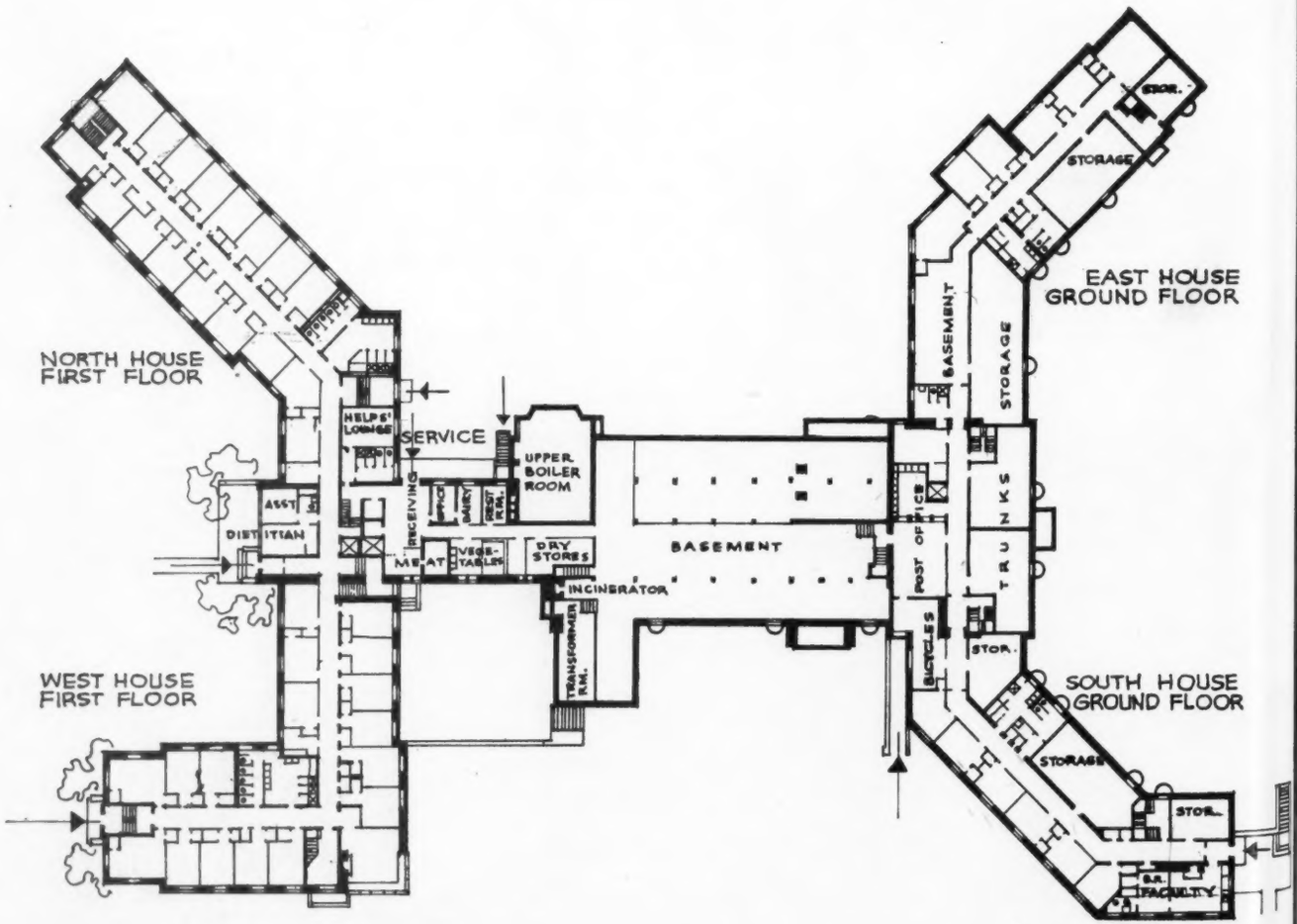
a. Kitchen location with respect to dining room.
b. Jackson is adjusted to units of very small numbers.
c. Mount Holyoke has central kitchen.
d. Students in these halls would like to have common rooms or smoking rooms on upper floors.
e. One dining hall plus one private dining room.
f. Kitchen below dining room is considered unsatisfactory.
g. Four stories including penthouse.
h. Four common rooms, at ratio of 1 to 22 girls, each floor.
i. Heating plant includes equipment to heat other dormitories.
j. bathroom between every two single rooms.
k. MacCracken Hall contains the main college library.
l. Lavatories are in all rooms.
m. Five stories plus elevator.
n. Three common rooms, at ratio of 1 to 28 girls, alternate floors.
p. Three stories plus tower.
q. Dual entrances and control are a great nuisance, as both units are now combined under one operating head.
r. Students would like to have half their number lodged in double rooms.
s. Two dining halls with folding doors between them.
t. Two dining halls serving 120 girls each, including some girls from other halls.
u. Wellesley is adjusted to units of large numbers of girls.
v. Location of dining room, far removed in basement is most unsatisfactory.
w. Stone-Davis is a cooperative building; accommodations and cost were reduced to a minimum.
x. Wheaton College has units varying from 43 to 170. Units of 50 are considered good. All girls eat in Commons which consists of 2 dining rooms serving approximately 150 and 300 persons. One kitchen serves 450 girls, 100 faculty, 70 servants.
y. Includes Director's apartment and four faculty apartments, engineer's apartment, accommodation for resident dietician, assistant, two nurses, and maid; also complete infirmary with five beds. Four common rooms at ratio of 1 for each unit, about 45 girls. Total cost inclusive of heating plant, kitchen equipment, lighting fixtures, and adjacent grading, but exclusive of utility lines, planting, furnishings, and professional fees.

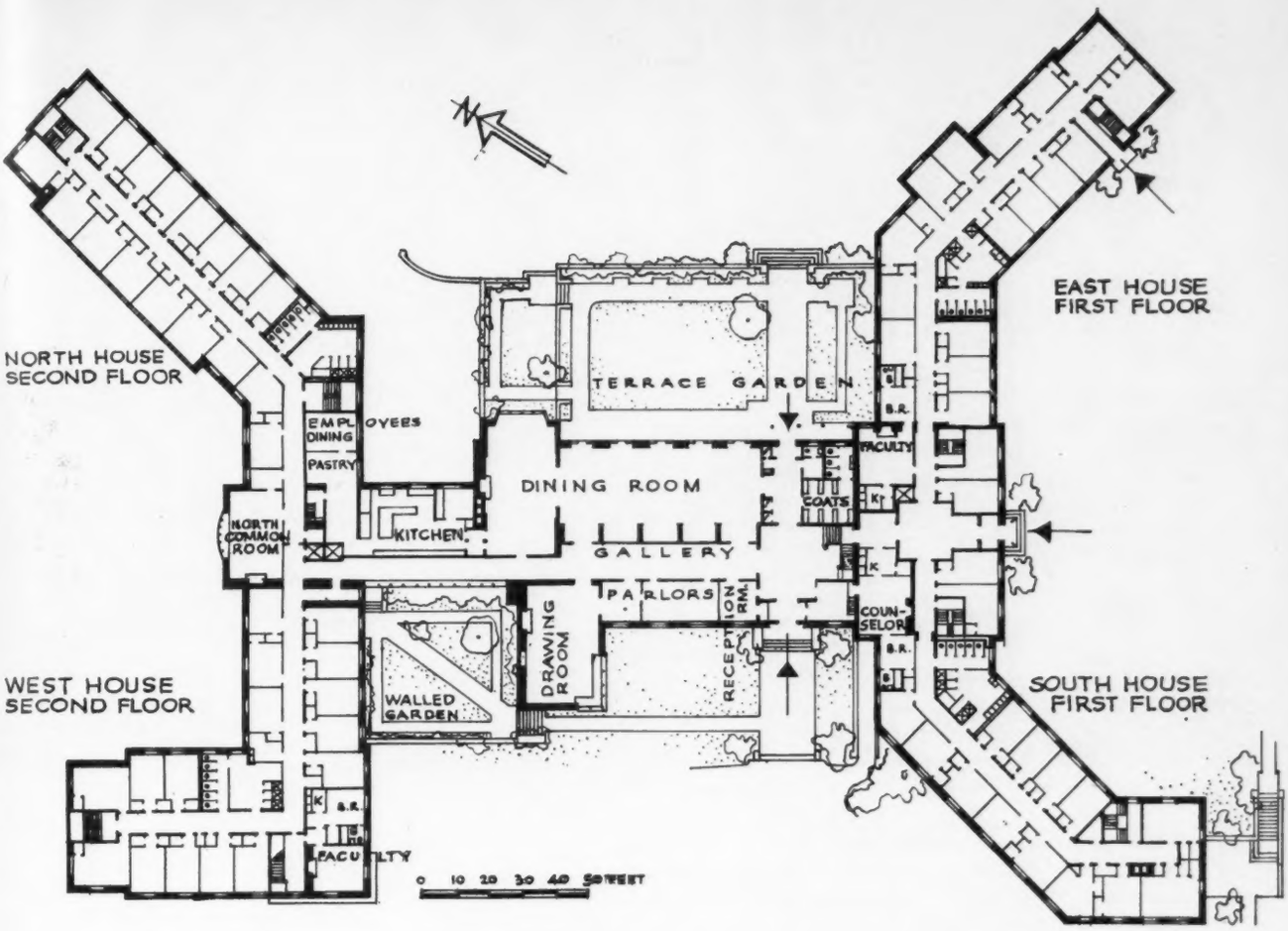


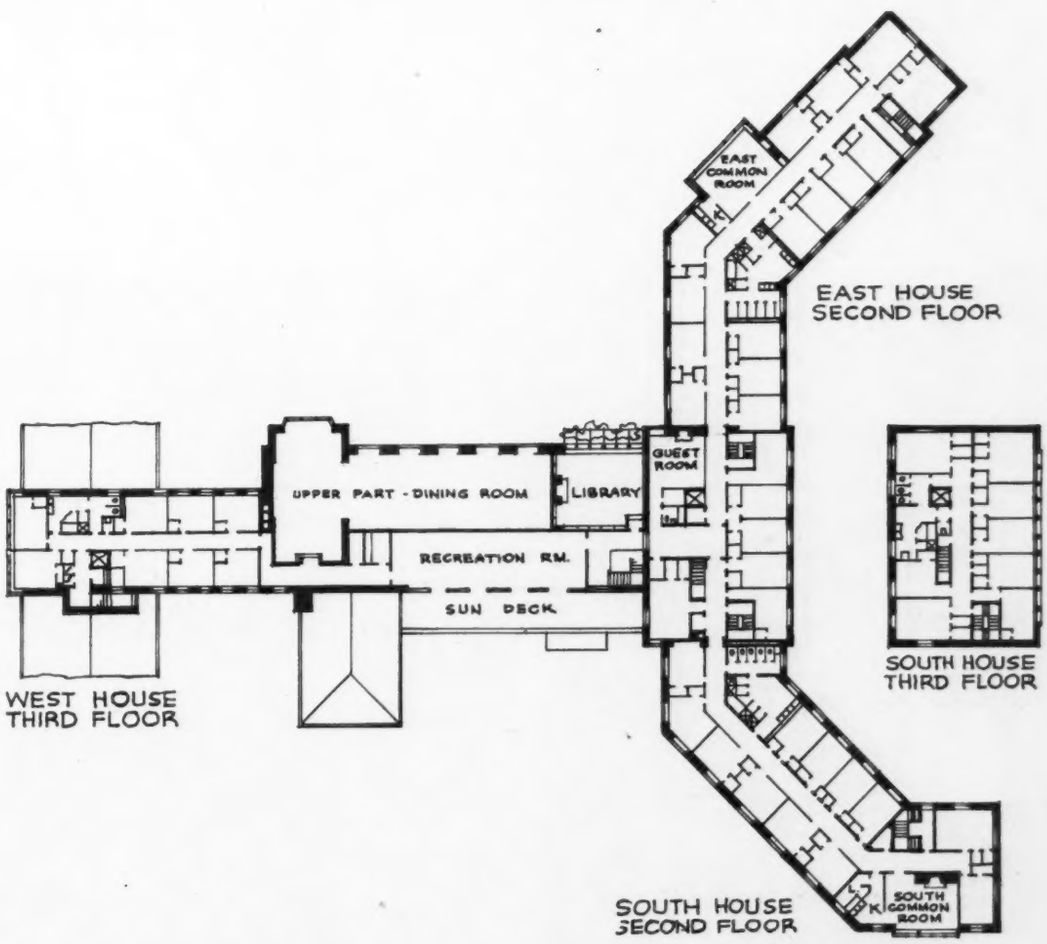
On the plans can be seen the subdivision of Mary Fisher Hall into five units: a central block and four wings housing about 45 students each. Division into units was also important in making the plan flexible. When first started, it was contemplated that only the central block plus East and South Houses were to be built. Later, North and West Houses were authorized, completing the original design. Since this had been anticipated, they were incorporated into the working drawings with little difficulty. Still later, the College had an opportunity to sell the building containing its infirmary, in Baltimore, and a new infirmary was added at ground floor level in North House.

Rooms are arranged with some variety, window arrangements are varied, and every effort was made to avoid the monotony of repetition. Corridors are necessary for circulation, control, and access to wash rooms and toilets; the latter are grouped for reasons of economy. The angles of the wings obviate long, dull vistas which might otherwise have resulted.

Besides students' rooms, each unit contains toilets and wash rooms on each floor, a faculty counsellor's suite, a common room, a small kitchen, a laundry, and ample closets.




NORTH HOUSE SECOND FLOOR
EMPLOYEES DINING
PASTRY
KITCHEN
NORTH COMMON ROOM
TERRACE GARDEN
DINING ROOM
GALLERY
PARLORS
RECEPTION RM.
DRAWING ROOM
WALLED GARDEN
B.R.
FACULTY
COATS
K
COUNSELOR
EAST HOUSE FIRST FLOOR
WEST HOUSE SECOND FLOOR
SOUTH HOUSE FIRST FLOOR
0 10 20 30 40 50 FEET


EAST COMMON ROOM
EAST HOUSE SECOND FLOOR
GUEST ROOM
UPPER PART - DINING ROOM
LIBRARY
RECREATION RM.
SUN DECK
WEST HOUSE THIRD FLOOR
SOUTH HOUSE THIRD FLOOR
SOUTH HOUSE SECOND FLOOR
SOUTH COMMON ROOM
K

General recreation rooms are provided for the use of all the occupants, as well as common rooms for individual houses. Above is the recreation room, which, though long, is divisible into units for relatively intimate groupings by means of screens. Walls are mustard and turquoise in color, the floor is checker-boarded in two tones of brown, and upholstery materials are mustard, rust, and turquoise. Below is the sun deck, overlooking the entrance court.

In addition to supervising construction, a phase of the work in which some 97 inspection trips were reported, the architects were authorized by the Board of Trustees to establish color schemes, and to select and procure furnishings throughout the building. A few items were specially designed.

Above is a view of the Drawing Room, which adjoins the small parlors. Walls are cocoa-colored, with yellow draperies and a carved blue-green rug. One of the Common Rooms is shown below. These are treated in various bright color schemes.

A typical student's room, simply but adequately furnished. Four different color schemes—gray-green, gray-blue, soft pink, and yellow—were used in these rooms, giving a pleasant variety of choice for the girls. Below are views along the passageway and gallery leading to the dining room and parlors.

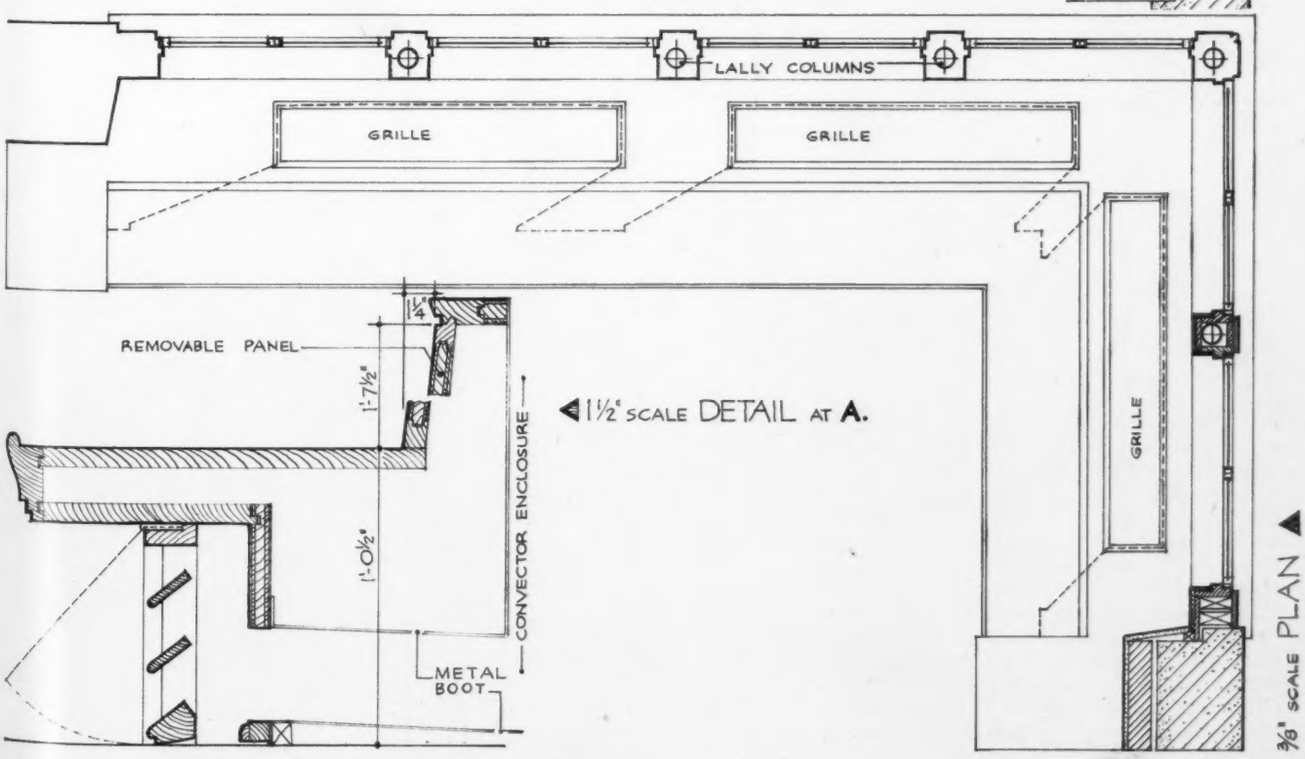
Materials and Equipment

Footings and foundation walls . . . . . poured concrete
Terraces . . . . . flagstone
Waterproofing . . . . . sprayed on
Wall construction . . Butler quarry-stone exterior; concrete block interior bearing walls; gypsum block interior partitions.
Floor construction . . concrete slab, bar joist supporting concrete plank.
Roof . . wood rafters; continuous wood sheathing, interlocking shingle tiles.
Windows . . . . . steel casements
Doors . . . . . paneled wood doors in hollow metal frames
Floor finishes . . wood laid in mastic (special rooms); linoleum (corridors); asphalt tile (students' bedrooms, common rooms); ceramic tile (toilets, washrooms); quarry tile (kitchens).
Interior wall finishes . . plaster; oak paneling (dining rooms); glazed tile wainscot (toilets, washrooms, kitchens); wood trim, except as noted.
Plumbing . . copper (supply); cast or wrought iron (soil and waste).
Heating . . . . . vacuum steam, zone controlled
Electric wiring . . . . . conduit
Ceilings . . plaster; acoustic tile (toilets, washrooms, kitchens); acoustic plaster (dining room).
Hardware . . . . . brass or bronze, dull chromium finish

The Drawing Room in Mary Fisher Hall, Goucher College, Baltimore County, Md., is for more formal entertaining than other recreation rooms in the dormitory. The window seat is specially designed; noteworthy are the Venetion blind pocket and curtain track at the window head. Walls are cocoa-brown, curtains golden yellow, rug blue-green.

Selected Details

Drawing Room Windows
Moore & Hutchins, Architect

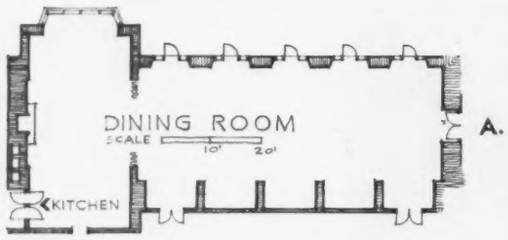


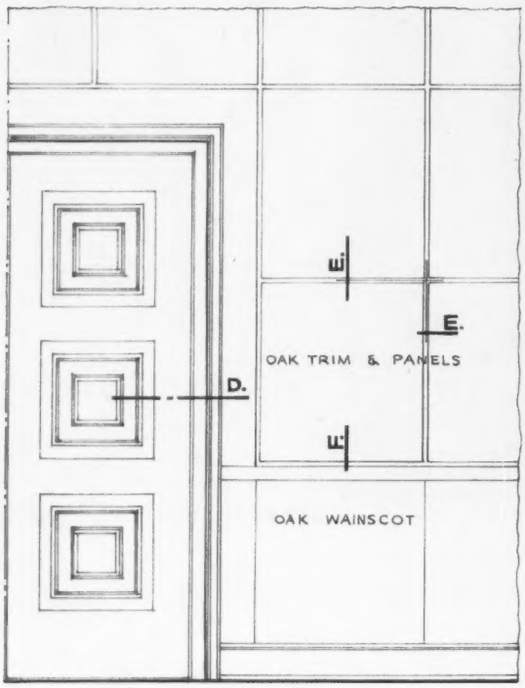
1½" SCALE DETAIL AT A.

Selected Details

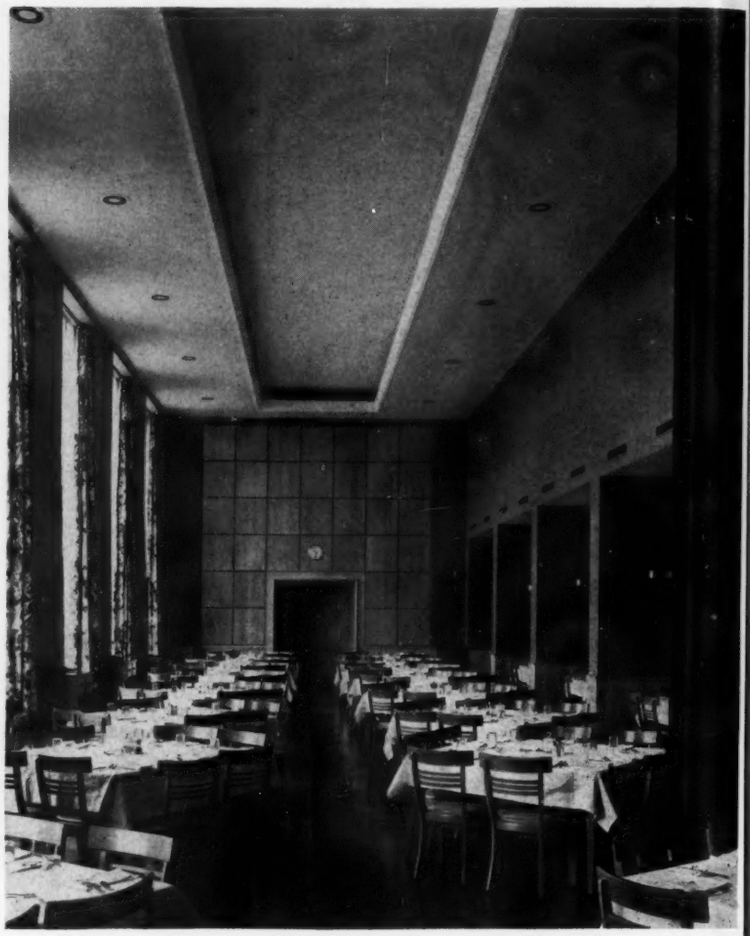
Dining Room
Moore & Hutchins, Architects

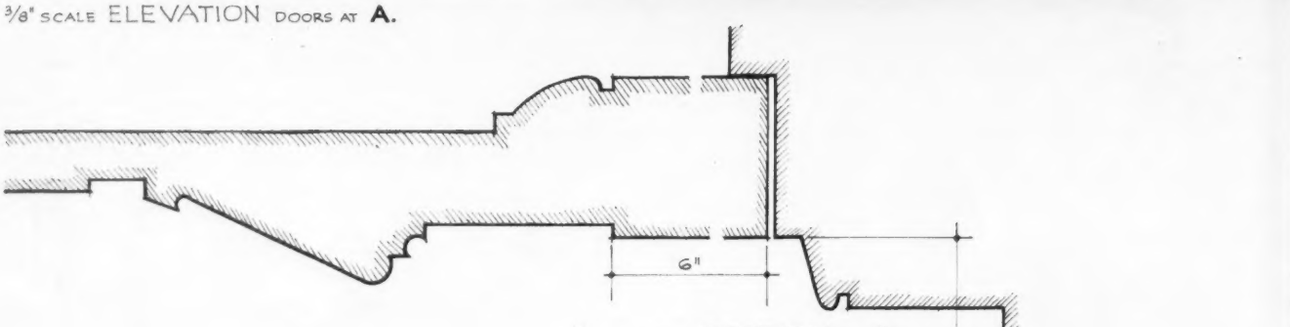
Dining Room, also in Mary Fisher Hall, seats 200. Its plan is unusual, for reasons explained below. Walls are deep olive-green, with very light bleached oak panelling. Draperies have a gold, white, viridian, and chartreuse design. As in other rooms, most wood finishes are light in tone.



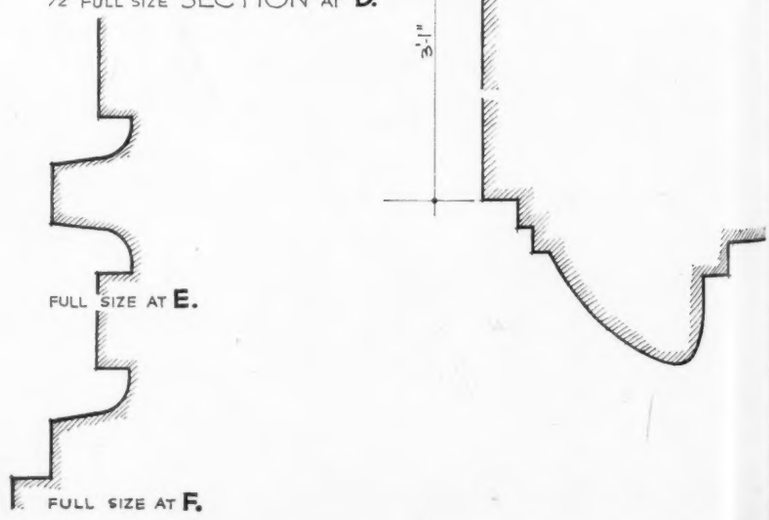


3/8" SCALE ELEVATION DOORS AT **A.**





½ FULL SIZE SECTION AT **D.**



FULL SIZE AT **E.**

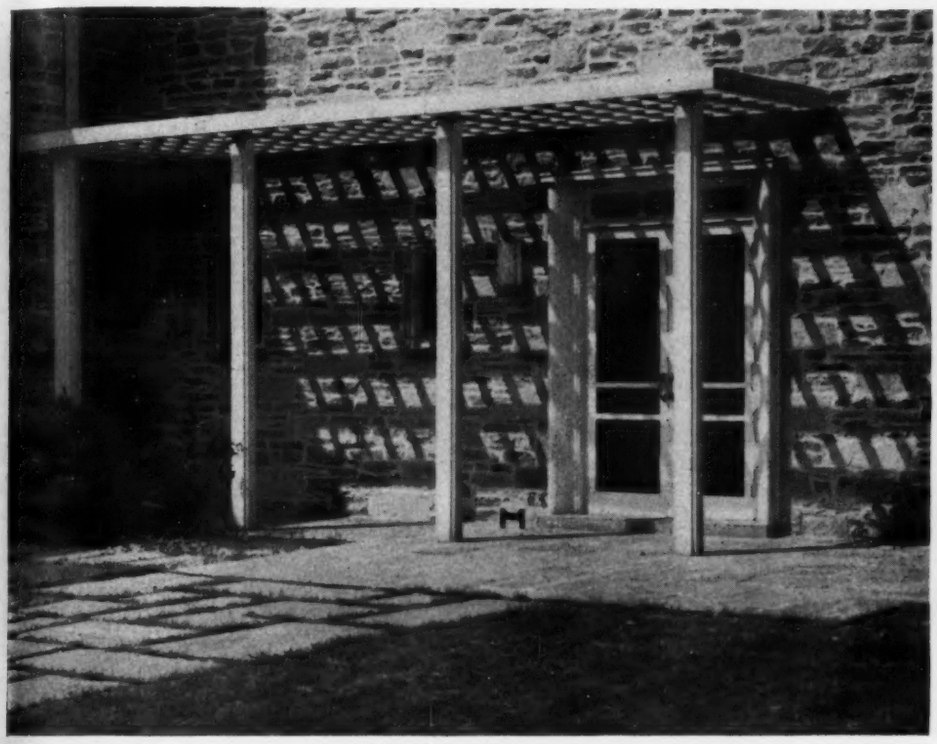
FULL SIZE AT **F.**

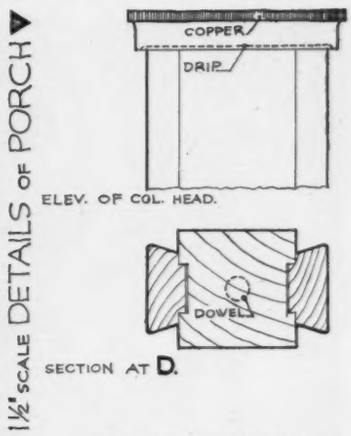
The Dining Room was planned to function as an integral part of the college—it is not just another eating place. Most of its capacity of 200 can be seated at square tables for eight, which were found through investigation to be most satisfactory for conversations of pairs or larger groups (better than round tables). Alcoves are provided for special modern language tables. The end with the bay, nearest the kitchen, can be curtained off from the rest of the room, so that a small number of persons can be pleasantly accommodated during limited summer sessions. Chairs are modifications of a current design. Illumination of certain surfaces supplements that supplied by direct flush-ceiling lenses.

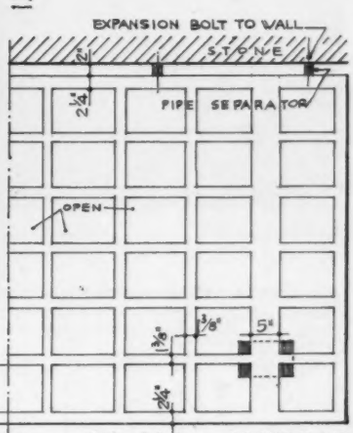
Selected Details

Terrace Entrance
Moore & Hutchins, Architects

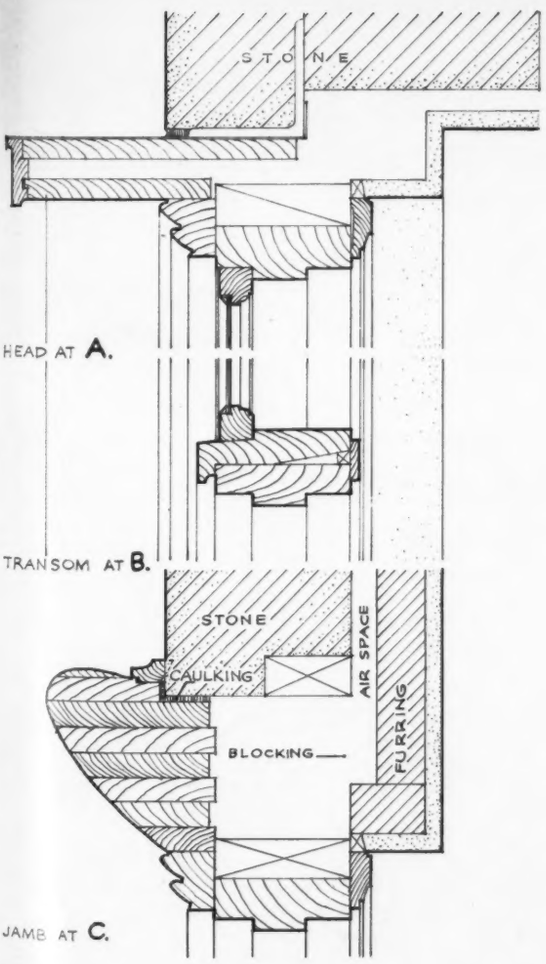
This simple entrance from the terrace has, overhead, a wooden trellis which was designed so it could be built at the mill and transported to the site in sections. The heavy jamb molding is built in sections to prevent checking.



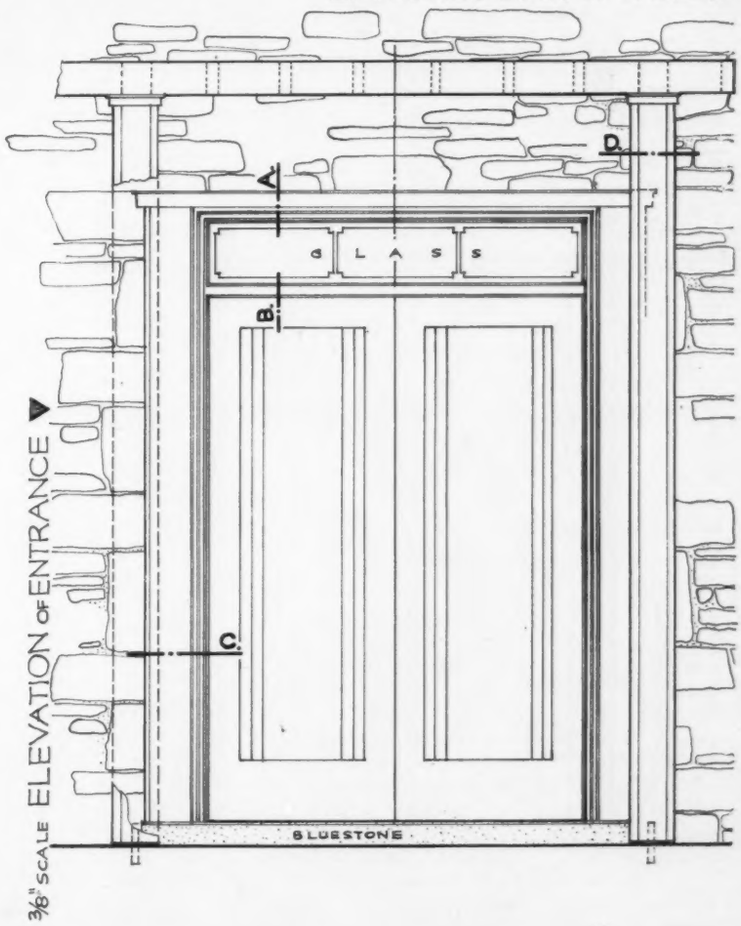




3/8" SCALE PLAN OF TRELLIS



1½" SCALE DETAILS OF ENTRANCE

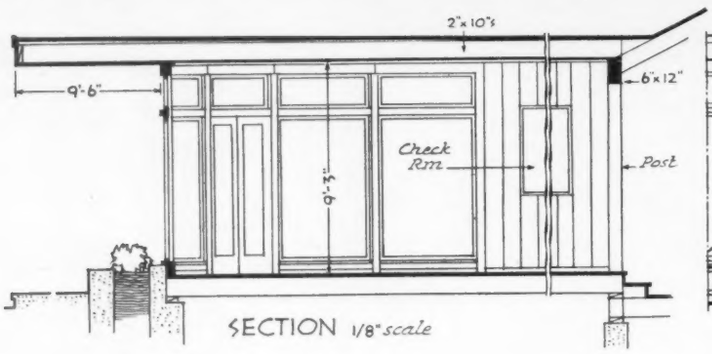


Selected Details

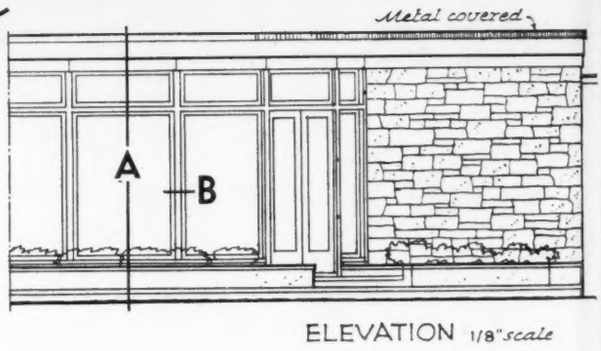
Entrance to Social Hall, Camp Tamiment, Tamiment, Pa.

Edwin J. Robin, Architect

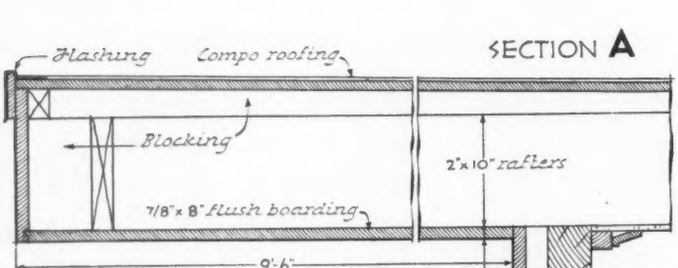
EZRA STOLLER



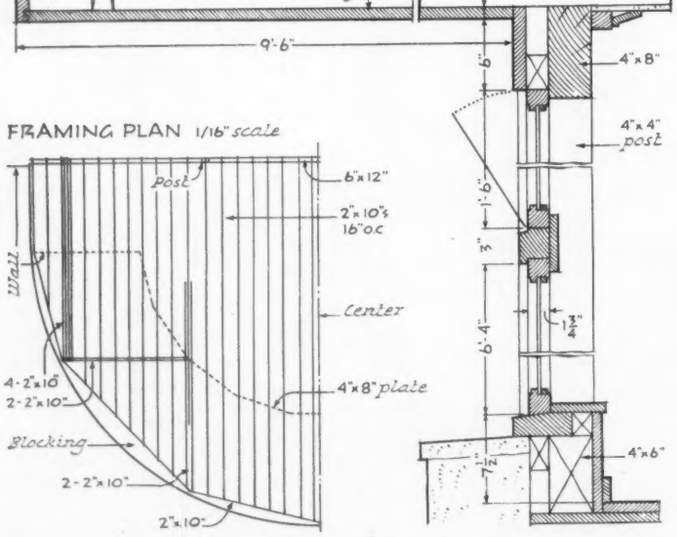
SECTION 1/8" scale



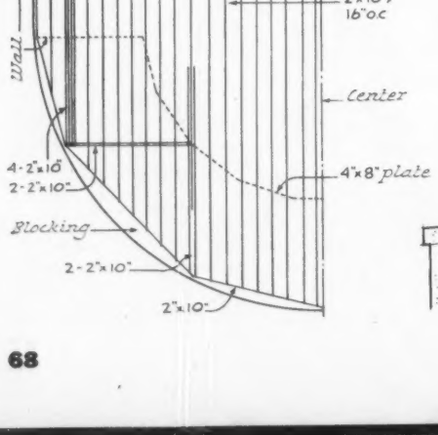
ELEVATION 1/8" scale

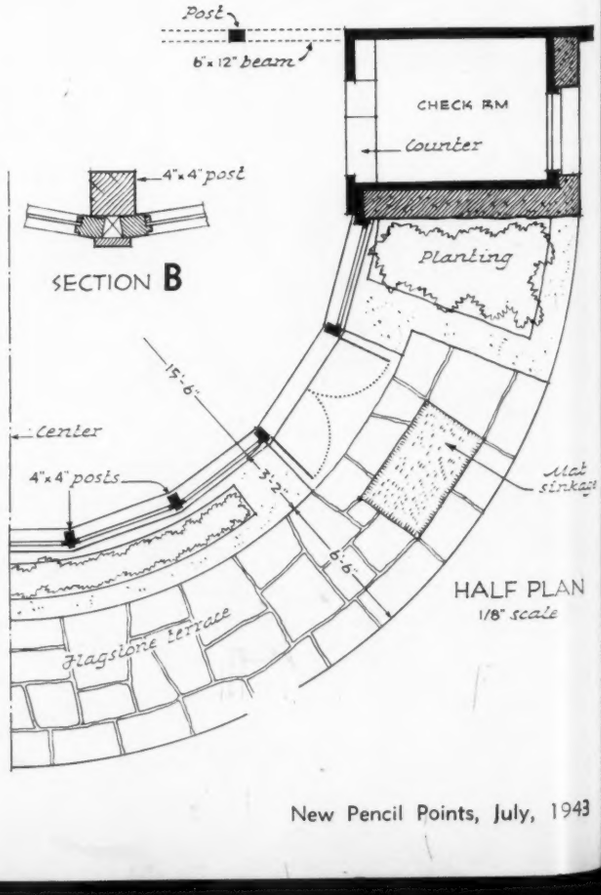


SECTION A



FRAMING PLAN 1/16" scale





HALF PLAN 1/8" scale

Discussions on Urbanism

This is the fifth installment of the reports on the discussions held by the Planning and Housing Division, School of Architecture, Columbia University. Unfortunately not all reports have been received in time for consecutive publication. Nos. 12 and 16 appear this month; Nos. 11, 13, 14 and 15 will be published in the next issue.

12 Official Planning Agencies, by Walter H. Blucher, Executive Director, American Society of Planning Officials; formerly with Detroit City Planning Commission. Active in early planning and housing studies, legislation, and work of organizations in these fields.

There are more than 1,200 official planning agencies in the United States, with records of 12 to 15 thousand individual members. But we don't believe the statistics are important; we know that 10 or 11 hundred agencies are inactive.

Two weeks ago Pomeroy mentioned the Standard City Planning Enabling Act. I won't discuss the form of the planning agency, whether it should be composed of citizens or officials, or whether it should be a commission or a department. The form is not important. Neither is the statute under which an agency functions. You don't need a good statute because effective planning can be done with poor or no statutes or ordinances. It can be done with resolutions if you have the confidence of the mayor and council among other things. If you have a commission consisting of people who are interested in planning, and if you have an adequate staff—which means enough money to do the job—you can have effective planning. Give me a city that *wants* to do planning, give me a city where you have citizens and an adequate staff who understand and want to do planning, and we will have planning in spite of ordinances. There I disagree with Alfred Bettman, who believes that you must specifically define the powers and functions of a planning agency. The benefit of defining is simply a matter of education. You help to inform the council of some of the things with which a planning agency should concern itself. But without it you *can* do a good job.

Planning today is at the highest level I have known it to reach in 24 years. I have never seen so many private agencies and committees anxious to plan. And we are so little able to provide the personnel for planning agencies!

There are a couple of important straws in the wind: The American Municipal Association which represents the State Municipal Leagues and several thousand municipalities in the United States, has decided that its principal function will be that of stimulating cities to do planning. The Council of State Governments has sent a letter to all governors saying that the governors' most important function is to determine what should be done in preparation for postwar planning in the 48 states. Already 40 governors have replied to say they are interested. Consequently, the Council is holding a series of regional meetings at which the governors will talk about postwar planning.

Let us take some specific examples. San Francisco has a very substantial budget and is undertaking a broad program. They are paying their director $10,000 a year and are building up a staff. They propose to develop a comprehensive plan for the community. In Los Angeles, city and county planning commissions have a $200,000 a year budget. In addition, a group of persons has raised, and is planning to continue to raise, $60,000 a year over a period of five years to supplement the work of the two official agencies.

Detroit has an extensive planning program. They have 30 employees at the present time. People there are willing to wait for a master plan before deciding about details. For instance: Somebody says they ought to locate an auditorium, or amend the zoning ordinance, or build an extensive super-highway system. The answer is, "We cannot determine where things should go until the master plan is prepared." Both Cleveland and Chicago have active programs. These are just examples from larger cities throughout the country. Similar events are taking place in smaller cities as well. In some, planning agencies are doing good jobs. Fargo, N. D., is one prize example. Another is Greenville, Ohio; there, in a very quiet way, in a town of 9,000 to 10,000, they are really planning. One of the principal citizens has acquired extensive lands along the river which, as he develops, he turns to the city. The only reason for his philanthropy is that the town has a plan, and he is interested in seeing it carried out.

Buffalo, as many of you know, has created a new planning agency. They are looking for a director of planning and are having considerable difficulty in finding one. Planning was the main question in the last election there, and both the mayor and the council were elected on that issue. Niagara Falls has established a planning agency. Philadelphia has a new planning commission. I think they are going to waive their residence requirements in order to get the best man available. Louisville, Kentucky, has established one of the first city-county planning commissions—the City of Louisville and the Jefferson County Planning Commission. Kansas City is now reviving its planning agency.

There was a time when I used to go around the country urging cities to establish planning agencies; I don't do it any more. When I am asked to go to a community to do that I find all sorts of excuses because I face the question, "Whom can we get to do the job?" There are few with experience, and the smaller towns cannot afford to pay one of these few enough to attract him—in competition with federal agencies, that is. I think the salaries adequate. In a community where the city engineer is getting $3,600, the city planner has to take $3,200 or $3,400 at the most. That is typical.

When you talk about official planning agencies, their form and composition, I am convinced that a planning agency is only as good as the government which it serves. Effective planning must be sponsored by effective and good government. That is one of the difficulties which I think the highly competent planning agency in Chicago is going to run into. The city has a new zoning ordinance which was recently drafted by a committee of the Council. The planning commission was consulted in a small way, but it has no power over the zoning ordinance, and it doesn't pass on amendments. Nor can it concern itself, except insofar as it is invited, with matters of transportation or highways. We have a subway commission in Chicago, a superhighway commission, and a transit committee; each goes its own blithe way, dealing with each question separately. They do not consider that the superhighway will have some effect on housing development in blighted areas. For example: the commission proposes a superhighway system, leading to the heart of the city, to cost two or three million dollars. The council approves such a plan and at the same time says it will not permit any more parking lots in the center of the city. Again, they plan 200-foot streets, but are not going to provide places to park cars. This is an example of a lack of coordination which I think makes planning ineffective no matter how good a staff or how much money you have. Where the government of a city is chaotic you cannot have effective planning.

The effectiveness of a planning agency usually depends upon one person. We talk of having different kinds of people on a planning agency. Shall they be architects, sociologists, engineers? It doesn't make much difference. When the charter provides specifically for the composition of the commission, the agency has declined year after year simply because the mayor, wanting to appoint someone, finds he *has* to appoint a real estate man or a business man. What often happens is that he puts in a third-, fourth-, or fifth-rate business man or engineer, whereas with freedom of choice he might have appointed at least a second-rate man from some other profession.

Alfred Bettman thinks the form of the agency should be similar

to that set up in the Model City Charter, and that it should take a two-thirds vote to over-rule the planning agency. Despite his success in Cincinnati, I think Bettman will admit that if he were to resign from his planning commission it would languish in a couple of years; the effectiveness of that agency revolves around Bettman. The agency in Spokane centers around Kizer. If you want an example of a planning agency which I think is going to be successful, I am willing to bet on Buffalo because of its chairman. He is a successful lawyer and businessman, intensely interested in planning, and willing to spend time on it. When you have a member of the planning commission, or better still the director, or the principal officer, in close relationship to the mayor and council, and when the mayor and the council have confidence in the agency, then planning is likely to be effective. When that confidence does not exist planning will not be effective irrespective of the planning agency. I am inclined to believe that planning commissions, as constituted, have not been particularly successful.

I have been asked to clarify the role of the planner including the work and effectiveness of planning agencies on various levels; municipal, state, regional, and national. There has been, and there is going to be, effective planning on the local level. There is going to be so much planning that we are not going to be able to take care of it.

What is happening in the states? Governors are interested. What has happened to the state planning boards that have been set up? There were 44 or 45 at one time. There are now 38. A dozen or more of those are doing an effective job. In a number of cases the state legislators did not like the term "state planning board" and changed the name. In other cases they abolished or improved the boards. That creates a problem for postwar planning at the state level because the governors are faced with the dilemma of using the existing agency, firing the existing personnel, or setting up new boards. In California there are about 22 bills in the legislature that have to do with planning. About half of them have to do with state planning. Indiana has just abolished its state planning board, and has set up a state economic board with an increased appropriation. Similar action is pending in a number of other states.

Few governors and legislators, apparently, realize that they have state planning commissions. All over the country they are setting up new agencies. That tells the story of the effectiveness of state planning boards.

On the regional level we have to admit that the planning has been metropolitan rather than interstate. I won't discuss the agencies in New England, in the Pacific Northwest, etc. There has been a lot of agitation for a regional-metropolitan planning agency in the San Francisco area. The Regional Planning Association in Chicago has been effective in zoning the cities around Chicago, but interestingly enough it does not plan for the city and the city agency is little concerned with regional planning.

I am convinced that we cannot avoid some form of metropolitan agency in the near future in view of what is happening to our cities. A great many industrial developments are outside city limits. I don't think enough consideration has been given to that important fact by those who are thinking in terms of rebuilding blighted urban areas. I recently attended a lecture by one of the newer experts on "Urbanism versus Suburbanism" and thought his thesis wrong. It should not be *versus,* but *and.*

The emphasis we have put on rebuilding blighted areas is unfortunate, because in emphasizing it we have overlooked a trend which we cannot afford to overlook. I am convinced that the Willow Run plant is to be a part of the Ford empire because of the nature of its design, because the Ford River Rouge Plant will be crowded, and because Ford owns most of the land between the plants. If Willow Run is going to be a part of the Ford empire, there is no point in talking about the redevelopment of central Detroit as far as Willow Run is concerned. You have to face the issue that new houses must be provided outside the city. The Chrysler tank plant is outside the city and even outside the county. We will have to provide living quarters near these industries if their new plants are permanent.

This does not mean that we are going to give up redevelopment of central urban areas. There is ample reason for rebuilding the central area of Chicago and of other cities of its kind. Chicago is a merchandising center, a distributing center. Approximately 200,000 people who work in downtown Chicago, and who formerly lived there, have moved to the suburbs. Except for those people who live along the Illinois Central and other railroads, transportation is bad. Many people who lived in blighted areas have moved out and have built houses on 35-foot lots with 3-foot side yards. The only difference between what they now occupy and what they moved from is the age of the house and the hour-and-a-half ride to work each day. I am convinced that it is wholly reasonable to rebuild the central area with 20 or 30 families to the acre and to provide homes for the 200,000 people who work there, but I do not think it is logical to place there the people who are working in industrial plants built away from the center of the city.

One thing worrying public officials is the tax base. We will have to provide new forms of taxation and some form of metropolitan organization so that industries that have gone outside the city can no longer avoid their responsibility to the community. I look forward to development along a metropolitan basis, though I cannot forecast at the moment just what form that development will take. Some bills have been drafted proposing that there be no money for planning unless it be done on a metropolitan basis; others say on a cooperative basis. I don't know the answer, but we must find an answer for that problem. I am not concerned with what name you give the agency that does the planning, but only with the planning function itself. Every community should engage in the function of planning. In a great many places it will be carried on by a housing agency, and that is all right if they do a good job. To do so, the agency must base its program on a comprehensive community plan. Many housing agencies realize that. A number of them would like to have the planning agency do that comprehensive planning. Some housing agencies would even like to have the official planning agency help determine the location of housing projects. Yet some planning agencies are not interested or do not have the staff—or the imagination, which is as bad, or worse. In order to do their job properly, a housing agency must engage in planning to some extent.

We face something of the same problem on the national level. We haven't yet determined who is going to do national urban planning. There are many proposals but no one has determined whether the NRPB, or the FWA, or the NHA Division of Urban studies should be responsible. I suppose each is hoping that planning will drop in its lap. Ascher started some projects when he was with the NRPB which were called Progressive Urban Planning Projects. One, completed in Tacoma, showed that within six or seven months it was possible to get together enough basic data so that basic conclusions could be reached concerning the development of a community. In Corpus Christi, Zisman has everybody in the community who is interested—real estate board, Chamber of Commerce, women's clubs, schools, public officials—helping in the preparation of a basic plan for the city. I am sorry the NRPB has not done more work of that kind. When its appropriation was denied in the House of Representatives, Corpus Christi citizens arose *en masse* and demanded that the appropriation be restored, because they had had a practical demonstration of the benefits to be derived from the Board's work.

At present the American Society of Planning Officials is in the process of drafting an urban redevelopment bill wholly different from the legislation previously adopted in four states. It provides the groundwork for urban redevelopment, but not the incentive. The incentive will have to come from some federal agency, and I anticipate that legislation of a nature similar to our state bill will be introduced in Congress very shortly.†

This raises the question of the effectiveness of local planning agencies with respect to reconstruction. The opportunity already exists for well-staffed planning agencies. I am not too sanguine that the agencies will rise to their opportunities, because many of them lack imagination. They are too willing to

† *Such legislation has now been introduced by Senator Thomas. It is the Senate Bill, S953.—Editor.*

consider their duties to consist of passing on zoning amendments; not enough have the imagination and courage to get at problems which are controversial and tremendous in scope. Maybe the size of the problem discourages them, for it means city rebuilding. I believe that public officials, who are customarily thought of as being cautious, are willing to go farther than planning agencies. The possibilities for urban redevelopment exist. We may take advantage of them if we put some new life and blood into planning agencies throughout the country.

I have been asked, "If urban redevelopment takes place, just how is this going to tie in with the local planning agency and how effective might that agency be in coordinating redevelopment studies? Are the local agencies going to initiate redevelopment work? If not, why not? Can the agencies as set up at present be effective in possible urban redevelopment? Are there examples of effective urban planning, particularly dealing with substandard and blighted areas, and how have they handled the situation?"

The examples I know have not been the kind that I would want to brag about. There have been some small attempts at urban redevelopment. There was one in Detroit for a large area which was proposed to be built by the Metropolitan Life Insurance Company. The city offered to provide $700,000 to cut land costs, yet they could not get costs per room down to a point where the project could be used by the average middle-class dweller. The cost was over $15 per room per month. Studies have also been made in St. Louis and in Chicago. These are interesting but unrealistic simply because they propose to replace low-income people with middle-class people, and fail to provide housing for those displaced. You cannot rebuild blighted areas with housing which is only for the middle-income group. There has been a lack of realism, too, on the part of persons who have been sponsoring urban redevelopment legislation. My point has been proved by the fact that here in New York it has been found impossible to do urban redevelopment under the 1941 Act, and now insurance companies want the right to have tax exemption with no control at all. I do not anticipate that any urban redevelopment will be done under the 1941 or 1942 bills; the necessary inducements do not exist.*

"What about planning at any level in the light of the present reactionary situation in Washington relative to the NRPB, etc?" I don't think the situation is as bad as it appears. In the first place, I am not convinced that Congress is opposed to planning on a national scale. A great deal of the opposition is personal. I think there is also a lack of understanding on the part of Congress as to what NRPB does. If the NRPB should be abolished there would still be national planning. One of the most interesting developments is the tremendous amount of support that has come to the NRPB in the last few weeks from groups which you would consider most reactionary. People who have been violently opposed to the New Deal and to Roosevelt have felt that the NRPB is good.

"What about the question of national planning? We have not yet heard about the effectiveness or possibilities of several planning studies that are being carried on under the guidance of the Urbanism Committee of the NRPB." I have told you about the Progressive Urban Planning Project of the NRPB. I cannot tell you very much about the Syracuse experiment, or the Urbanism Section of the NHA, because they both are just getting under way.

In spite of apparent opposition to planning, I think it has reached a point of respectability where the opportunities before us are tremendous. The first question a man asked me this afternoon was, "What can you do to make the word 'planning' respectable?" Planning is respectable as never before. The United States Chamber of Commerce has a postwar planning committee. Look at the Committee for Economic Development which is urging every industry to undertake planning programs. Our great difficulty in all of these opportunities is going to be in educating planning agencies to the point where they have imagination and courage to undertake the job which should be done, and of finding them personnel.

* Late in April, 1943 the Metropolitan Life Insurance Co. announced publicly their projected redevelopment of a lower East Side area in New York City—a sort of super Parkchester, with a density of 416 persons per acre.

16 Wartime Tools for Postwar Urban Planning, by Charles S. Ascher, NHA Regional Representative, lecturer, author, member of planning, housing, administration, and citizens' organizations including NAHO, ASPO, Citizens Housing Council, N. Y. State Federation of Official Planning Boards, Etc.

It was Herbert Emmerich, Commissioner of the Federal Public Housing Authority, who remarked to National Housing Agency Administrator Blandford's ten regional representatives last summer that if they could forge the tools of "programming" housing during the war, they would be making as great a contribution to postwar city planning as the writing of many volumes of research reports. It seems, therefore, an appropriate contribution to a series of discussions on urbanism to describe the tools we are struggling to perfect during a time when our economy is totally controlled, to see whether these techniques have any application to a postwar economy.

Now, of course, it is the shortage of materials that makes the programming urgent. What will it be in the postwar world that will furnish a similar sense of urgency, a sense that there must be some kind of collective restraints, guidance, and direction for the provision of houses and communities? At present, nothing is to be built that is not absolutely necessary to the war effort. How, then, are we to particularize this general objective, established by agreement with the War Production Board? What is the minimum number of houses needed to avoid impeding the war effort? One of the difficulties is the pressure from people who demand houses and have the money—for the first time in years—to make that demand effective. These people can get to war work from where they live, although with inconvenience and although their living conditions are far from ideal. By the standards of wartime, failure to provide them with houses would not impede the war effort.

Our formulation has thus far been that houses are to be provided only for workers who have to be brought into the community from beyond a reasonable commuting distance because there are no workers in the community who could do the essential war work or could be trained to do it. In our shop lingo, we are to provide houses only for indispensable in-migrant war workers. Again we may ask: In the postwar world, could there be some comparable policy or directive in the light of which one could formulate a program of housing to guide the community?

What constitutes evidence of the expected number of in-migrants? Of the number of houses to be built? We get our frame of reference from the War Production Board, which controls the flow of materials, and from the War Manpower Commission, which controls the flow of people. It has been exceedingly interesting to watch the War Manpower Commission and its constituent, the United States Employment Service, try to spell out the number of in-migrants for, say, six months ahead—a sensible period over which to program, since it takes about that long to build the house.

I have made this observation that may have some significance for the postwar implications of what we are doing. For our answers WMC, WPB, NHA have staffed themselves with economists, industrial and labor analysts, housing economists—men trained in the spirit of objective social science, whose emotional attitude is that of an outsider watching the play of natural forces, bringing scientific tools to bear. But these men have now been put in the position not of forecasting, but of controlling. It's not, how many workers will be brought to town; but, how many will be *allowed* to come to town. My social science friends have had a terrible time adjusting to this new role; it runs against their grain.

Furthermore, we have turned to economists to exercise judgments and deal with data that lie more and more in the realm of social psychology. We know how many vacant beds exist in town: but how many will be rendered available? What emotion will make the housewife open her extra room to a strange war worker? The number of in-migrants depends on the extent to which local women enter war work. Perhaps we must call upon a different group of experts, armed with different tools and skills, to help us forecast the play of forces of that sort.

Discussions on Urbanism

Our wartime concern with labor supply and demand as the basis for framing a housing program has definite significance for postwar community programs. But then, the Federal Housing Administration for years before the war had made housing market surveys of communities which involved first of all asking industrialists what they foresaw as the future employment patterns of their enterprises. If time permitted, I should enjoy sharing with you some examples of the ingenuity we have to use now in stretching labor supply—so as to avoid having to build houses. Many industrialists look upon more homes as a substitute for a labor stabilization plan or sound personnel practices.

Timing the housing so that it will come on the market at the moment of in-migration is difficult. Where we are late in providing houses, we have often been saved by the gong: unfortunately for the war effort, the industrial plant has often been late in going into production. In these instances in which we have had the houses ready too soon, local residents—usually badly overcrowded—have been unable to see why they couldn't live in the new houses; and in a few places where local managers could not resist these pressures or the desire to show prompt, full occupancy, we have had to schedule another set of houses for the delayed in-migrants.

Coleman Woodbury pointed out another problem in a recent issue of *NAHO News*. The number of houses is a function of manpower and migration; it is derivate and it is a "residual." WMC may estimate that there are 10,000 jobs to be filled. Perhaps 4,000 can be filled by local women and transfers from nonessential industry. Of the 6,000 in-migrants, perhaps 2,000 can be taken care of in existing rooms, 2,000 by converting existing dwellings. New housing is needed only for 2,000—20% of the estimated total. Suppose that WMC's estimate is off by 10%—not a wide margin of error for that kind of forecasting. This change will halve or double the housing program.

What will be the role of national, local, and possible intermediate agencies in making postwar community housing programs? At present the control policies are national. WPB's Requirements Committee receives the claims of some 16 agencies for a share in the available critical materials. By a process probably of mutual accommodation and education, this group decides how much steel and copper will be available for housing for the next three months.

Changes in global war strategy modify the national production program. We cut back defensive armor and increase airplane output. It takes some months for the major decision of the United Nations' Chiefs of Staff to translate itself into a procurement schedule and still more months for this to trickle down into adjustments of local contracts. In the postwar world will there be any national policies of equal urgency that will impose a test for the program of development of a community?

At present, when the national policies have been fixed, NHA formulates recommendations for urban housing programs through ten regional offices of the Administrator. This form of decentralization has been given real meaning by the Administrator. A local housing authority director in my region remarked recently with some amazement that he hadn't been in Washington since our office was established in June, 1942; he got the answers to his questions in New York.

One's first impulse is to say that postwar community programs should of course be made locally. If in the postwar world urban development is taken care of out of local resources, one might well say that the national government should keep its hands off. It seems pretty clear, however, that there is a paramount national interest in the postwar organization of the nation which will manifest itself in some kind of federal support, contribution, or aid; and in the pattern that we have found appropriate to our federal system, we assure the national interest by attaching some conditions, limits, or controls to these aids. There will be some representation of national thinking in postwar local plans.

I can see some usefulness for an intermediate agency between Washington and the locality, even after the war, if for no other reason, for the administrative convenience of federal agencies and those who must deal with them. How many sub-national centers should there be? Should it be possible, say for a local delegation, to ride not more than overnight to find out the terms of federal participation?

Another reason for continuing sub-national organization is the difficulty of bringing into focus—I will use the horrid word, "coordinating"—the efforts of the many federal agencies that impinge upon a community. Have you observed the recent executive order of the President setting up a Committee for Congested Areas of War Production—representatives of the Army, Navy, WPB, ODT, WMC, NHA, and others, with the Director of the Budget as Chairman? The plan is to have an area director of the committee in each of five or six great, crowded seaports, who can convene representatives of the federal agencies, the state and local governments, to adjust their programs. If he fails, he appeals to the national chairman to bring about adjustment in Washington. It is too early to tell whether we have here another wartime jury rig, or whether we have here the beginning of an agency that we have talked of for two decades—the urban equivalent of the county agent who interprets all the federal programs to the farmer and, *per contra,* brings to the federal agencies the farmers' response. We may have here the beginning of a new tool for urban postwar programs.

Another tool being developed in wartime with tremendous possibilities for postwar planning is the Progressive Urban Planning Projects which I had some hand in organizing at the National Resources Planning Board last year, ably caried out by Robert Mitchell and his colleagues. It was based on the belief that we really had a tremendous amount of data available about our cities —particularly in contrast with twenty years ago—and that if the right people in the community were brought to pool their judgment and knowledge, if the existing data were outlined simply and boldly, we could in a time of more nearly six months than three years put our fingers on the problems of the community and even spell out the direction of the proper solutions. At least, at the end of six months, we would see more clearly which vital facts were missing and we could seek the answers to *those* questions, instead of collecting all possible facts in the hope that some would be useful sometime.

Two cities during the past year have lent themselves to demonstration experiments. I have seen the sketches that Arthur McVoy brought back from Tacoma, Wash.; I have not yet seen those that Samuel Zisman is bringing back from Corpus Christi, Texas. McVoy's results seem to substantiate the validity of the assumption from which we started. His sketches outline major problems and suggest ways in which Tacoma could move to solve them. The two sketches that interested me most (provided for in the working manual of the progressive scheme) were those that he made at the end of his first seven days: one sketching what seemed wrong, the other outlining possible solutions—the fresh view, before he became too deeply involved in detail.

This, then, seems to me a tremendously important tool for postwar planning, especially as there will be a greater demand for community planning than we shall have qualified experts to meet.

Zisman had great success in Corpus Christi in mobilizing all the people in the community who had something to contribute to any part of the job. Corpus Christi is going to keep right on moving from here: we have given them a taste for something they want more of.

Let me share with you one last anecdote about the shape of postwar planning, which illuminates particularly the relationship between local groups and national agencies. You may know that Syracuse, N. Y., has been selected as the experimental city with which *Fortune* magazine is to collaborate in developing a postwar plan. The Mayor has appointed a Postwar Planning Council, with the Chancellor of the University as chairman and prominent industrialists as vice-chairmen. The Chancellor shrewdly sees the task as one of community self-education and is not making it a campus affair.

(Mr. Ascher's remarks will be concluded next month.)

REVIEWS

(Continued from page 20)

ery. The design is based on orientation needed by the three divisions and on deep research into the problems presented by laboratory gases, heavy machinery, and the need for quiet in administration, dining, museum, and auditorium divisions.

Some private houses published we hope are not typical of the work in Argentina. Knowing they are not the only ones, it is unfortunate to see the better works left unpublished.

Canada

Journal of the Royal Architectural Institute of Canada. (April and May issues.) The April issue opens with a rather warm editorial warning students to remember the past—past buildings in their own cities and the architects who designed them. It seems to fear that interest in modern buildings all over the world means lack of appreciation of Canada's own historical heritage. City planning activities in Montreal are outlined in an address before the RAIC and show a typical growth of interest in city planning in Montreal since 1920. While citing the approach taken in the St. Louis Plan, the speaker, Aime Cousineau, Director of City Planning Department, points out the similarities of both cities' problems and suggests the same approach for Montreal.

At a meeting of the RAIC it was suggested that a "Gallup poll' be undertaken to discover the needs and desires of the housewife in postwar housing. It is doubtful that the result would be worthwhile since such polls in this country have hardly produced workable suggestions

In the May issue there is an article by Dean Hudnut of Harvard. Seemingly anachronistic at first glance and unlike other works of this true modern the reader must remember that the critic's work is to constantly challenge to improvement. Dean Hudnut does not deplore the sanitation, utilitarianism, and improvement in building techniques achieved at least in some degree and as seen in war housing; rather he believes these benefits should now be tempered by the incorporation of emotional values at well. It is a plea for the restoration of humanitarian values in buildings for human habitation.

England

Architectural Design and Construction. (May issue.) Comments on the Government Cooperative Building Plan for 40,000 damaged houses in London strike strongly at the fact that much repair is planned and notes that most of the houses are "ripe" for demolition and little is to be gained by repairing them. The Government has also undertaken to reorganize the building industry and this article warns that concentration in the hands of single large contractors is unwise. The fifth installment of the Housing Forum, a monthly feature considering past housing

(Continued on page 76)

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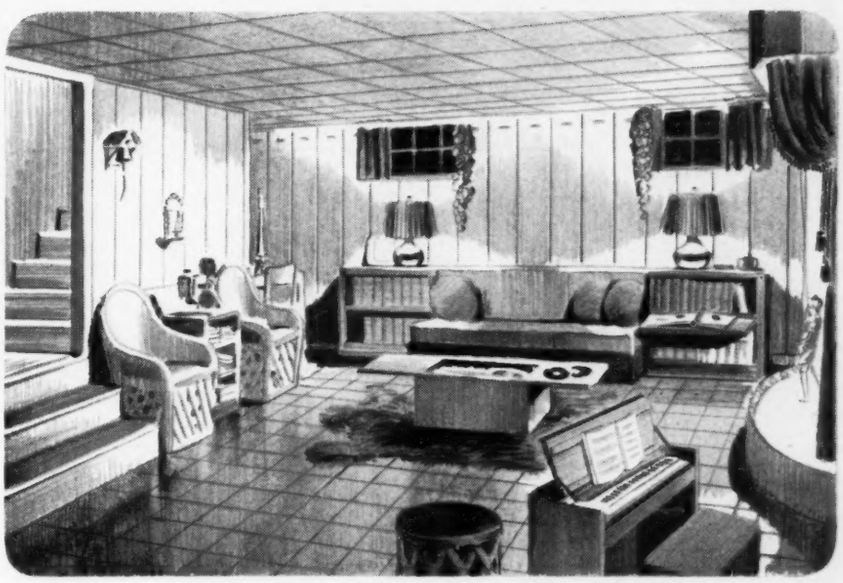

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(Continued from page 75)

developments in preparation for postwar work, covers developments from 1919 to 1939. Most attention is given to housing developments and "flats."

Continuing the publication of articles by Charles Hellstrand, on Swedish co-operative housing, this issue publishes Part I of an article on Swedish standards of planning and building.

A discussion of the Pentagon Building, which we could wish had never seeped out of this country, in plan and photograph, justly criticizes its monumental rigidity of plan and confusing traffic system.

Planning Bibliography

Fourth in the series of annotated bibliographies of planning literature, by Margaret Greenough King.

Rebuilding Britain

Lund Humphries. Published for The Royal Institute of British Architects. London. February, 1943. Obtainable at the British Information Service, 30 Rockefeller Plaza, New York.

A well organized study of the need for comprehensive national resources organization and town planning in postwar Britain. This booklet has been published with the intent of arming the citizen with planning knowledge, that he may play an intelligent part in shaping his postwar environment. Developments in town planning in various other countries are sketched briefly and coupled with general suggestions for national planning policy. It provides a challenging picture of the possibilities for bettering social, economic, and political conditions arising from careful disposition and integration of the various physical elements of society. Appropriate illustrations of architectural and town planning projects provide added interest, and a short bibliography on planning literature fulfills the function of this publication. Recommended to American planners for its foresight.

This publication has much to recommend it in its realistic approach to the many phases of air development. It has none of the Buck Rogers touch about it, even when it hints at huge stratospheric vehicles to come, but is based on knowledge of the many possibilities in the field of aviation.

—Margaret Greenough King

National Resources Development Report For 1943

Parts I and II of the message from the President transmitting NRPB reports to the House of Representatives, March 10, 1943. U. S. Government Printing Office, 25c. The Introduction states the aims of the NRPB in such a way as to challenge the thought of men to a comprehension of the enormous size of the problem of world as well as national planning.

Part I deals with "Post War Plan and Program" and is divided into *Findings and Recommendations* and *Supporting Technical Material*. In the first category, plans for transition from war to peace, development of an expanding economy, and service and security, and action by state, local governments and regions are taken up in detail. In the section devoted to *Supporting Technical Material* ten of the most active factors in redevelopment have been carefully researched.

Part II, *Wartime Planning for War and Postwar*, is divided into sections on Re source Use; Trends in Production; Employment; Prices and Consumption, 1942; Public Works Planning; and Regional, State, and Local Planning.

The research has been conducted with a thoroughness and impartiality which recommends it to all planners. There is no axe to grind here, but all aspects are laid out in detailed form much to the credit of the NRPB.

Wartime Facts and Postwar Problems

A Study and Discussion Manual. The Twentieth Century Fund, 330 West 42nd St., New York 18, N. Y. March 1943. An excellent booklet on some of the many economic and social problems created by the war. It does not pretend to be the final authority on the subject which it covers, but to be a discussion manual for groups inter-

(Continued on page 78)

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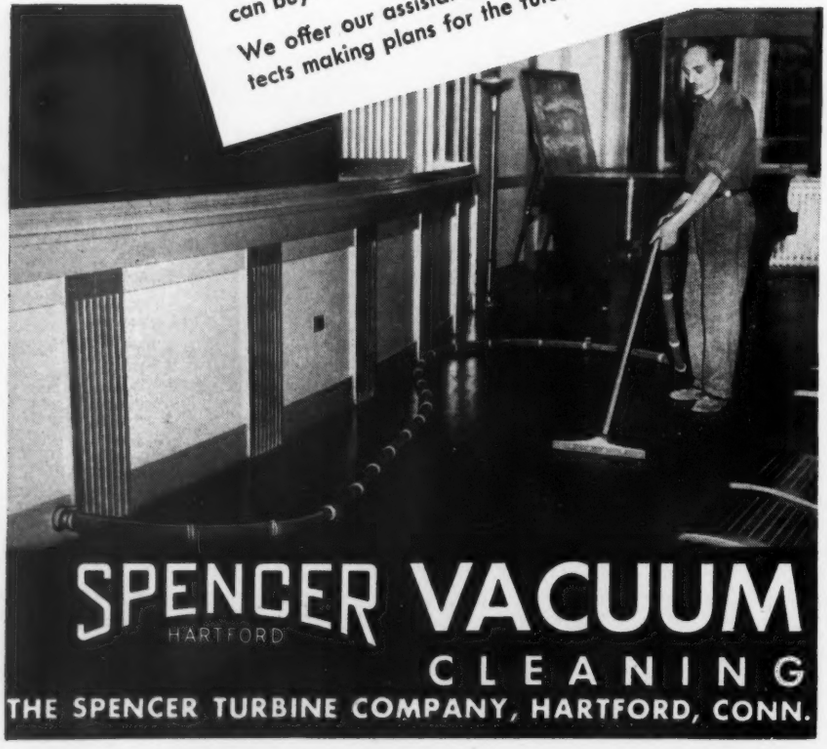

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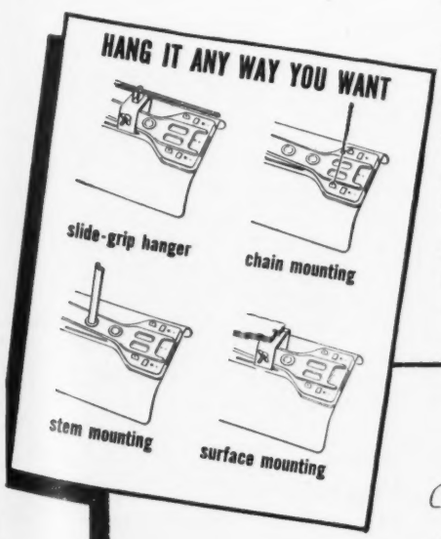

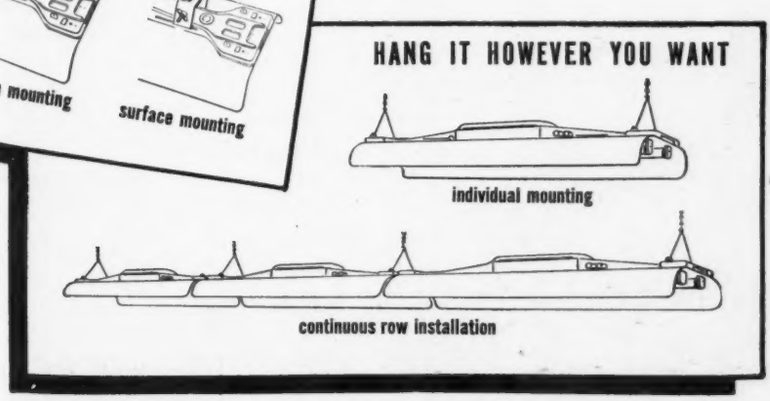

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(Continued from page 76)

ested in current world affairs and postwar reorganization. The first chapter, "What Do We Want of the Peace," stresses our desire for an expanded economy to provide full employment, and the need for security for all people through a system of government savings. The editors feel that possibly the upsurge of feeling against what is a necessary government control during war will send us again into the confusion of the last postwar period. There is praise for the work of the NRPB in realizing and acting on the problem. The section on "Have We the Resources" leads into the chapter on "International Relations" and leads the reader to suspect that our aims in this direction are far from altruistic. Facts on "Industry and Business" as affected by the war, are impressive and somewhat alarming when it is seen what tremendous facilities we must utilize to keep up to capacity production after the war. Transportation; finance; agriculture; labor; public works and urban redevelopment; a fairly comprehensive chapter on housing; health; education; and one on economic security complete the range of subjects touched upon. The insistence of the publication on government support and its feeling that security must be guaranteed all men are the principle characteristics of this booklet. Whether this means a nation of WPA and "relief"-minded men is the question most would ask of the committee.

(Continued on page 84)

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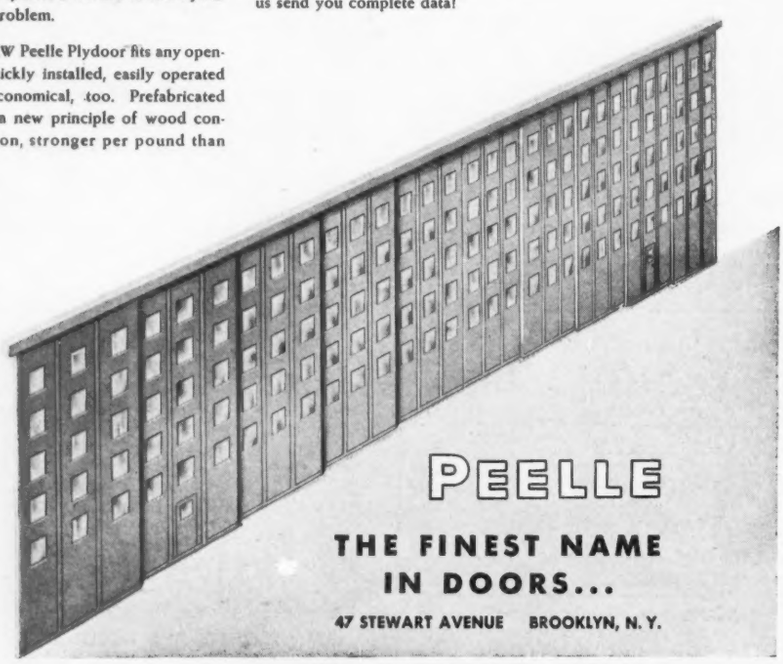

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Manufacturer's Literature

Publications mentioned here are all 8½ x 11" unless otherwise specified and will be sent free of charge, upon request. When writing for any of the literature noted here, please mention THE NEW PENCIL POINTS.

Pipe Fittings

Four page instruction folder details the installation procedure for Ermeto safety tube and pipe fittings made by The Weatherhead Co., 300 E. 131 St., Cleveland, Ohio. Photographs illustrate each step of the assembly and disassembly of the fittings.

Lighting

In a new catalog recently issued by Sylvania Electric Products, Inc., Salem, Mass., emphasis is placed on simplification, standardization, and adaptability of the firm's line of non-metallic reflectors.

Whiteprints

A new folder from Ozalid Products Division, Johnson City, N. Y., shows how, under actual shop conditions, an Ozalid print with maroon lines on a white background stands up in comparison with a blueprint. In addition, the firm Dry Developing Process is completely described. Four pages.

Wood

A well-illustrated, 20-page booklet from West Coast Lumberman's Association, 364 Stuart Bldg., Seattle, Wash., describes the mechanical properties, growth, production, and use of West Coast hemlock.

Switches

Two types of Shutbrak enclosed switches, the interlocking and the non-interlocking, are described in a 20-page booklet, 7¾" x 10⅝", A.I.A. File No. 31-D-42, from Frank Adam Electric Co., St. Louis, Mo. This Bulletin No. 70 describes details of design and construction, contains diagrams and suggested specifications.

Wood

Up-to-date information on heavy timber framing, beam and column connection details, and roof truss details are illustrated in a new 16-page booklet, "Heavy Timber Construction Details", available from National Lumber Mfrs. Ass'n, 1319-18th St. N.W., Washington 6, D. C. Building Code requirements of the National Board of Fire Underwriters for heavy timber framing are also included in this technical publication.

Prefabrication

The development of Homasote Precision-Built Construction in prefabricated units for any type of wood frame structure is described in a 16-page booklet available from the Homasote Co., Trenton, N. J. The booklet shows the step-by-step methods of producing mass-produced units.

(Continued on page 80)

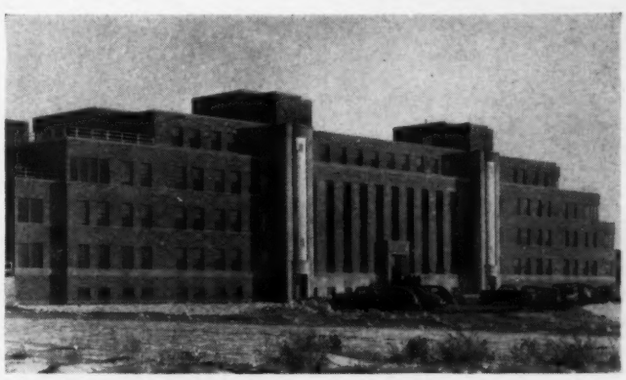
NEWS ABOUT GLASS from "Pittsburgh"

TRANSPARENT HERCULITE STAIR PANELS.

These smart panels of tempered plate glass in the Statler Hotel, Washington, D. C., indicate the new architectural possibilities of glass. Herculited glass is four times as strong, six times as resistant to mechanical shock as regular glass of equal thickness. Architects: Holabird and Root.

FOR YOUR STORE FRONT FILE.

There is practically no limit to the design possibilities of Pittco Store Front Products in creating eye-catching, sales-winning store fronts. This example of the use of PC Glass Blocks with Carrara Structural Glass is worth saving for reference when building restrictions are lifted. Architect: George W. Neff.



WINDOW GLASS

is an important contribution to the appearance and utility of any building with large window areas. That's why many architects are making sure of quality window glass by specifying Pennvernon for important jobs. This is the Pennvernon-glazed Rome and Murphy Hospital at Rome. N. Y. Architects: Bagg and Newkirk. Harold G. Rice, Associate.

PITTSBURGH PLATE GLASS COMPANY · PITTSBURGH, PA.

"PITTSBURGH" stands for Quality Glass and Paint

VIEWS

(Continued from page 78)

Laminated Trusses

New, 28-page booklet, 6″x9″, (A.I.A. File No. 19-B-3) from Rilco Laminated Products, Inc., First National Bank Bldg., St. Paul, Minn., shows typical applications of factory-fabricated timber trusses and glued laminated roof trusses, beams, arches, and continuous framing members for use in factories, warehouses, theaters, churches, bowling alleys, etc.

Fences

Data sheet (2 pages, Section III, File 3-D-10) on industrial fences presents information on two standard types, one constructed of random-width Redwood boards, the other of 12″ boards with battens and fence cap. For each style, a complete materials list is presented for various heights. California Redwood Association, 405 Montgomery St., San Francisco.

Unit Heaters

A description of the Grid cast iron unit heaters, introduced as a substitute for aluminimum heating sections to cooperate with the war effort, and especially prepared for the architect, is contained in a catalog sheet now being offered by D. J. Murray Mfg. Co., Wausau, Wisc.

Expansion Bolts

Broadside, with return mailing card, issued by The Rawlplug Co., Inc., 98 Lafayette St., New York, describing and offering free a 14″x20″ ready reference wall chart, "Expansion Bolt and Screw Anchor Dimensional Chart." Broadside explains and describes the chart in detail.

Wiring Manual

New 48-page manual on General Electric Q-Floor wiring for under-floor electrical distribution in H. H. Robertson cellular steel Q-Floors may be had from the Construction Materials Division, General Electric Co., Appliance & Merchandise Department, Bridgeport, Conn. The manual includes catalog listings of G.E. Q-Floor wiring accessories and fittings, and detailed data on layout and installation procedure. A 13-page technical data section contains illustrations and complete descriptions of G.E. Q-Floor wiring materials. Layout and installation formations are illustrated with diagrams and photographs. Sample specifications are included.

Paint Manual

New, 16-page booklet, "Architectural Specifications for Painting, Varnishing and Finishing," illustrated with black-and-white photographs and two pages of color chips, covers finishing of exteriors and interiors of private and commercial properties and of structural steel and ornamental metalwork. The manual, which describes Kem-Tone resin emulsion paint, may be had from Sherwin-Williams Co., 101 Prospect Ave. N.W., Cleveland, Ohio.

Boilers

"Dividends From Your Power Plant" is a 48-page booklet which covers the principles governing the economical operation of steam-generating equipment. The booklet discusses subjects such as the dollars-and-cents importance of boiler efficiency the relation between steam costs and profits, natural versus mechanical draft, carbon dioxide and carbon monoxide, excess air, and factors that govern labor costs in the boiler room. The text is pointed up with examples, tables, and sketches. Preferred Utilities Co., Inc., 33 W. 60th St., New York.

Wood Sash

4-page folder on projected wood sash contains four 18″ x 24″ sheets with full-size sill, jamb, and head details of the sash installation in frame, masonry, and poured concrete construction. One sheet contains full-size details of the new awning-type window. This unit is similar in design and operation to that of the projected sash except that muntin bars are lighter, and units are made to sizes which make it possible to use the same size glass as is commonly used in double-hung windows. Rolscreen Co., Pella, Iowa.

(Continued on page 82)

Big Doors...

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Barcol OVERdoors Make for Efficiency in War Production Plants

EASY operation, weathertight closing, minimum maintenance requirements — these are the features of Barcol OVERdoors that save time and trouble, thus contributing materially to greater efficiency in plant operations. The picture shows three Barcol OVERdoors each approximately 20 feet wide and 14 feet high recently installed in the receiving and shipping building of a war production plant. In addition to a full line of standard and specialized overhead type doors, we furnish electric operators for most all sizes and types of doors and gates. Write for specification data.

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WRITE for our quick-reference handbook on "How to Ship by AIR EXPRESS During Wartime." Dept. PR-2, Railway Express Agency, 230 Park Avenue, N.Y.C.

(Continued from page 80)

Ventilating

"The Case of the Careless Kitchen," written in an easy-going, "whodunit" style characteristic of best-selling mystery stories, discusses bad ventilation as a criminal violation, and urges a precedent for cleaner, better postwar living. Readers will get a chuckle out of this satirical treatment of realistic problems. Copies of the "brief" (5¼x7½″ in size) may be had from Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago, Ill.

Sheet Metal

By combining sheet steel with stearine-cottonseed pitches and pulverized slate, Cheney Metal Products Co., Trenton, N. J., has produced Cheney Metal, a product which can be sheared, bent, die formed, riveted, and formed into heating and ventilating ducts, flashings, gutters, all general sheet metal work. The various products into which it can be worked are illustrated and described in a four-page catalog. Specifications included.

Zinc Steel

Zinc plated steel sheet, offered as a practical alternate for more critical metals, is described in a small 4-page leaflet, 3¼x5¾″ available from American Nickeloid Co., Peru, Ill. The zinc is electro-plated to a steel base, and the galvanic action which takes place is said to impart additional corrosion resistance to the steel. Available in sheets only, up to 36x96″, in most gauges.

Bathtubs to Bombs

"How One Plant Went to War" is a pictorial report of the wartime activities of the Salem, Ohio plant of Eljer Co., peacetime manufacturers of kitchen and bathroom equipment. What is pictured in this 8¼x 10¾″ booklet is a sample of the job industrial America is doing today to demonstrate the ingenuity of Democracy.

Doors

Overhead doors for residential, special, and commercial uses, built of wood or steel for manual or electric operation are described in a 12-page catalog from Overhead Door Corp., Hartford City, Ind. Installations and construction details are included.

Plywood

16-page catalog, "Weldwood—The Modern Material of Infinite Application," from United States Plywood Corp., 616 W. 46th St., New York, discusses the versatility of this material. Included: thumb-nail description of plywood manufacture. Scores of applications are described and illustrated, ranging from templates to aquaria, from boat hulls to dinettes.

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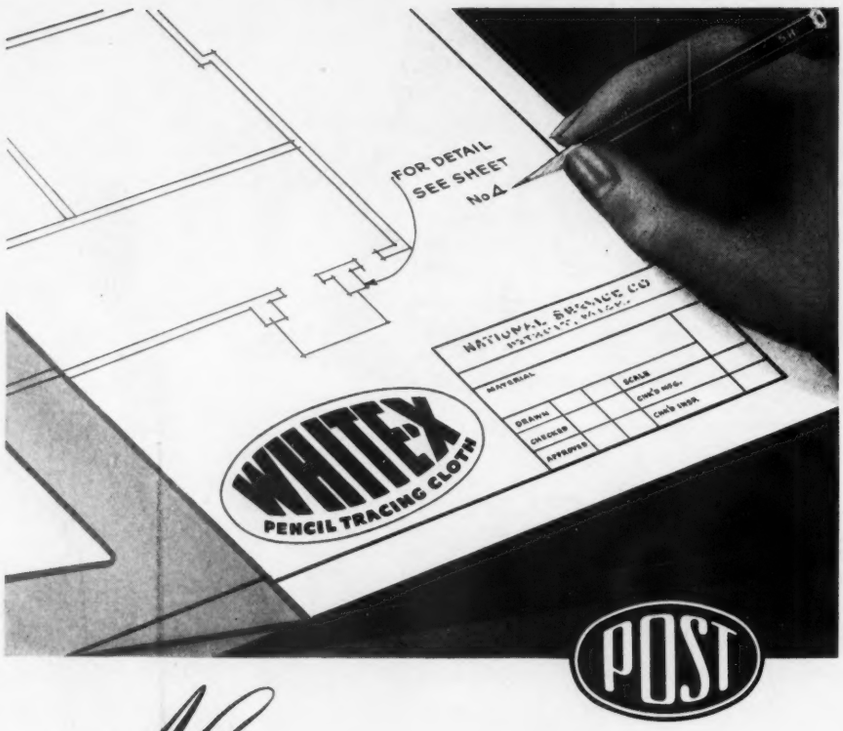

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(Continued from page 78)

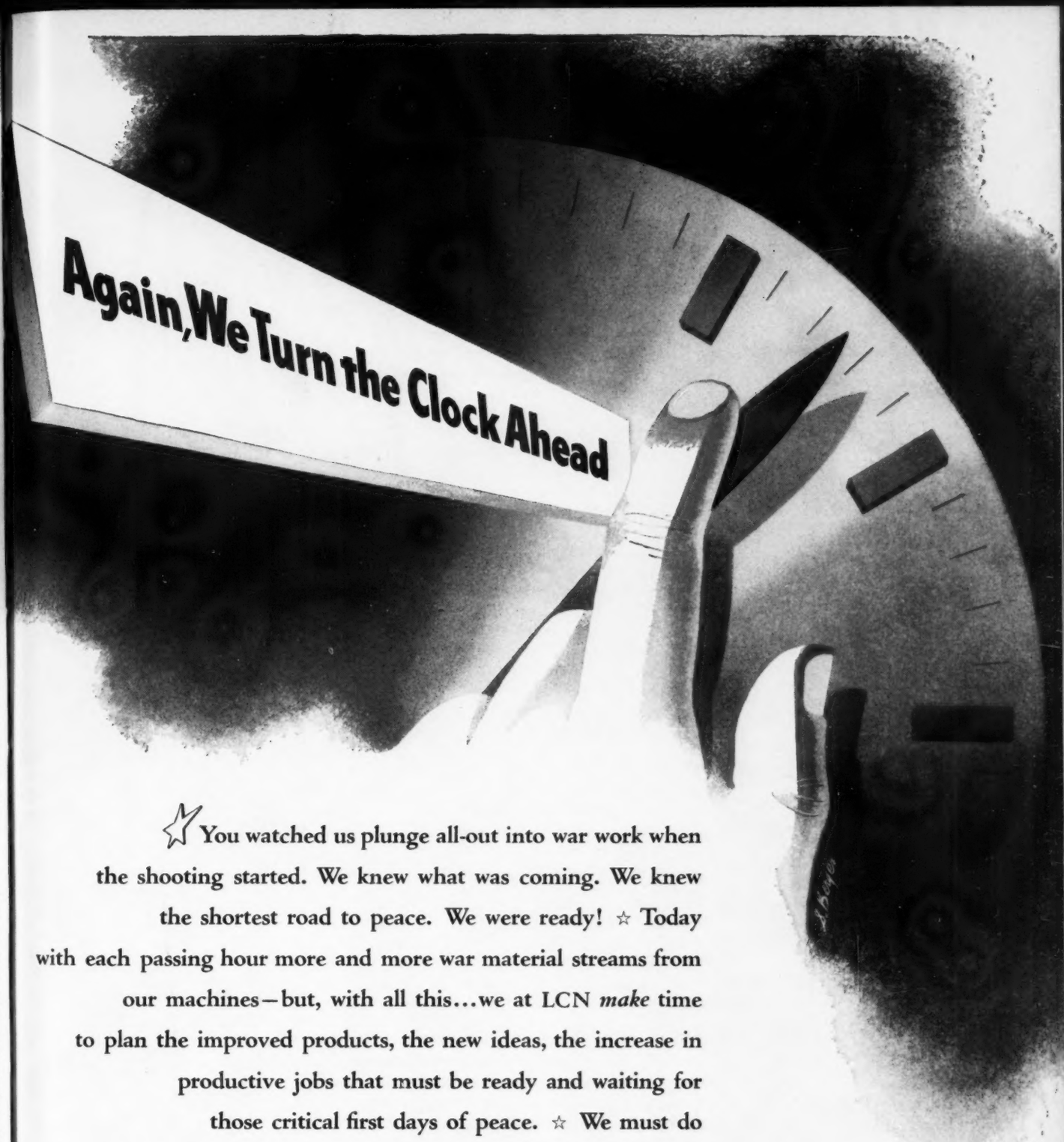
Airplane & Tomorrow's World
Public Affairs Pamphlets, No. 78. 10c. By Waldemar Kaempffert. Published by the Public Affairs Committee, 30 Rockefeller Plaza, New York. A concise presentation of many of the possibilities of the airplane, and its effect on world trade, nationalism, internationalism, and local industry after the war. One of the most important probabilities is the change in importance of the many now small cities which will, in the future, be geographically useful for air trade. The booklet also contains diagrams and a map of major airlines before the war. The discussion brings an interesting and challenging concept to view; one which may necessarily change national policy after the war.

C.H.C. Housing News
May, 1943 issue. Published by Citizens' Housing Council, 470 Fourth Ave., New York. 10c. A criticism of the methods used in the City Planning Commissions' public hearing on the Metropolitan Life Insurance Co. housing project is contained in this issue, written by Harold S. Buttenheim. Also discussed are the need for proper rezoning plans for New York before any layouts are conceived, the clarification of the NHA war housing policy, and a new bill for providing urban redevelopment on a national scale, introduced by Utah's Senator Elbert D. Thomas.

Land Problems in Relation to Housing
By Arthur C. Holden. Reprinted from The Annals *American Academy of Political and Social Science, Philadelphia.* Mr. Holden takes up one of the fundamental problems of housing—that of land acquisition. Instead of leaping to building plans, he has realized the ownership problem, laid out alternative plans for governmental acquisition to prevent unfair prices asked by "unsympathetic" owners. He feels that the amount of government interference to be allowed depends upon the belief of the individual in private versus public rights. *Capital and Current Services to the Land,* and *Uneconomic Use of Centrally-Located Land* take up two of New York's major housing problems and are but two of the subjects in the booklet. (It would be helpful if more of New York's city planners were aware of the problems raised by these articles.)

Postwar Planning in the United States
An organizational directory published by The Twentieth Century Fund, 330 W. 42nd St., New York 18, N. Y., February, 1943. This is the second of a series of directories on agencies working in the field of postwar problems. In its description of these agencies the booklet includes the back-

(Continued on page 86)



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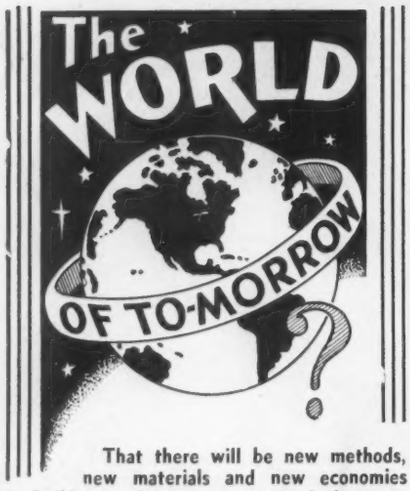

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(Continued from page 84)

ground, activities, and personnel of each group. As an index to those people who are banded together for the purpose of accomplishing a better postwar world it is excellent, concisely put, and clearly laid out. Included is a short bibliography on postwar planning literature.

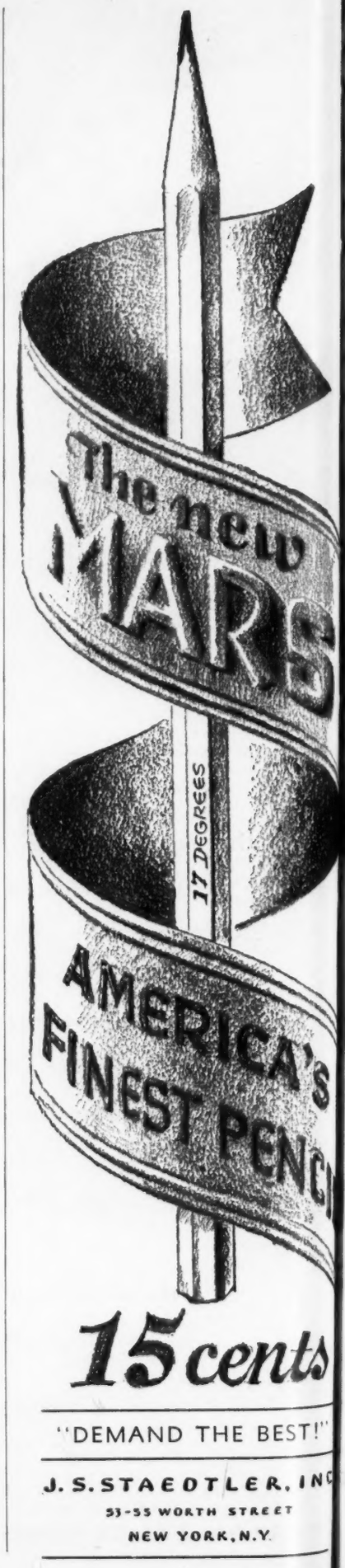
Proposed Postwar Program of the City of New York

Prepared by the City Planning Commission, Municipal Bldg., New York, 25c. This attractively laid-out booklet, if it represents the actual postwar plans for New York, will be a disappointment to most far-seeing planners. It should be read carefully by those interested in the city's and country's future. The Mayor's committee awards a project to each city department. They include a new scientific institution, modernization of the city's prisons, new schools, college buildings, hospitals, libraries, markets, museums and institutions, parks, highways, public buildings, integration of rapid transit lines, decentralization of the Welfare Administration, and, lastly, Postwar Public Housing Plans. It would seem that the order of importance was somewhat confused, and that the last should be first. Also projected are new police stations, fire stations, and shipping facilities.

An awesome list, indeed, but one to cause consternation among those experts who know that no dentist would attempt to fill a cavity without first removing the decay. New York now exists and will, within too short a time, start downward on a most outmoded building code and set of zoning laws. Before one can begin to plan a project to fill the time of each department after the war, it is necessary to look at the city as a great organic beast whose disease must be cured before he can be dressed in ruffles to appear before his audience—the world.

It is the question of whether it is a fear of looking the enormity of the problem in the eye and of tackling it, or of failing completely to realize its existence that makes these proposals so startling. However, it may be, it is shameful indeed that this large city should be so far behind many smaller ones in comprehending the problem and of attending to first things first.

It cannot be said too strongly that complete re-zoning and re-organization of tax evaluations are absolute prerequisites to any planning for New York City and that after that follow transportation and housing in importance. In his introduction the Mayor says, "The country learned that it took from one year to a year and a half to obtain the benefits of a vast recovery building program which the federal government had provided in 1934 and 1935. New York City, finding itself better prepared with working plans, was able to obtain a larger share of federal grants in advance of most other communities in the country."



The home of the future will use a lot of aluminum in its construction. That's an "educated" prediction. As a result of war work, more designers and manufacturers than ever before are now accustomed to working with aluminum. They are anxious to utilize its many advantages.

Look at the rapid progress aluminum windows were making before the war took them off the market. Their easy operation, weathertightness and fine appearance sold them then, and they continue to keep home owners happy. Many a family buying war bonds to apply on a postwar home has mentally specified "Aluminum Windows".

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Remember, in considering aluminum, you can think in terms of lower costs than ever before. On ingots, aluminum is 25 per cent lower than in 1939. New manufacturing techniques and large quantity production have already lowered prices for all fabricated aluminum products. ALUMINUM COMPANY OF AMERICA, 2198 Gulf Bldg., Pittsburgh, Penna.

The Window of the Future is Aluminum

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REVIEWS

(Continued from page 10)

been accomplished with a minimum waste of time and money.

While we recognize the many shortcomings, let us also be cognizant of the achievements in community and federal cooperation, resulting in shelter for thousands and thousands of war workers.

GLENN STANTON, A.I.A.
Portland, Oregon

Inference in Error

The brief item on the proposed war housing program for the 1944 fiscal year which was printed on page 26 of the June issue of NEW PENCIL POINTS contains certain inaccuracies that I would like to call to your attention.

The request for an additional $400,000,000 war housing appropriation under the Lanham Act, which is now pending before Congress, relates only to the publicly-financed portion of the war housing construction which we contemplate will be needed to accommodate war labor migration during the next fiscal year. If approved by Congress, the housing financed by the appropriation will not accommodate more than a million workers.

On the basis of the present estimates, this appropriation would finance approximately 90,000 family units and 70,000 single-person units through new construction, and 40,000 family units through the conversion of existing structures. In addition, the proposed program contemplates that approximately 90,000 family units will be provided through privately-financed construction, and that 40,000 family units would be provided through privately-financed conversion.

The item infers that the proposed program for the 1944 fiscal year calls for the construction of 1,500,000 new dwelling units. Actually, that figure approximates the total number of war housing units which will have been provided since July 1, 1940, of which only one-sixth are involved in the proposed program for the coming fiscal year.

HOWARD F. VICKERY
Director of Information
National Housing Agency,
Washington, D. C.

(We sincerely regret such inaccuracies and are always glad to make corrections when they are called to our attention. —Editor)

NEW PENCIL POINTS appreciates receiving letters from its readers, pro and con letters, both because discussion is a healthy thing and because it allows the editors to keep more closely in touch with the thought of the men in the architectural profession.

Data Wanted

PHILIP CLARK FISK, Architect, Honolulu, Hawaii. (Data and catalogs for complete A.I.A. file.)

MR. EUGENE F. MAGENAU, 173 Center Street, Concord, N. H., would like to obtain copies of PENCIL POINTS from Aug.-Dec., 1929; Jan.-May, July, Sept., Nov. of 1930; Jan., Feb., Apr., July, Aug., Dec. of 1932.

FRANCIS I. MARAZZO, Engineer Draftsman, 2441 S. Watts Sreet, Philadelphia, Pa. (Data and catalogs for complete A.I.A. file.)

FREDDY WACHTEN, Technical Designer, Caixa Postal 3922, Sao Paulo, Brazil, South America. (Data for complete A.I.A. file.)

Notice

DRAFTSMAN in War Department will render perspectives of houses, apartments, stores. A-1 references. Fee, $25. Paul I. Hickman, 2018—15 St. N.W., Washington, D. C.

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Sample chapter headings such as Shear and Bond Stresses, Formulas for Bending, Design of Beams, and Proportioning and Mixing are indicative of the material covered. Practice problems, safe-load tables, derivation of basic formulas and ample illustrative examples are included so as to make no advanced training necessary to understand the discussion. Advanced mathematics is not needed. Flexible covers and pocket size make it excellent for field use as well as office work.

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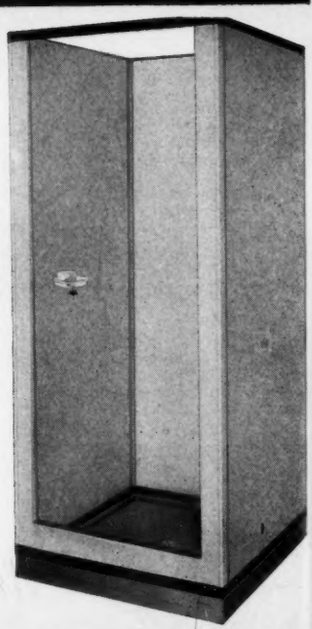

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